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ABSTRACT

This monograph discusses a project involving 246 teachers that investigated a Staff Development Model (SDM) and a Research-Based Assessment Plan (RAP) for their potential to improve the identification and education of gifted students from economically disadvantaged families, some of whom have limited proficiency in the English language. The concept of giftedness as a psychological construct defined by a basic set of traits, aptitudes, and behaviors (TABs) formed the basis of the two models. Overall, the models were perceived as an effective way to: (1) improve teachers' ability in observing giftedness in target population student groups; and (2) facilitate the collection and use of information derived from multiple sources when making decisions for program placement and services. The TABs associated with the giftedness construct appeared to provide a feasible way to train teachers to recognize exceptional ability in target population student groups. Secondly, the SDM and the RAP process appeared to affirm the importance of involving teachers and other staff in the entire process of identifying gifted target students. Finally, feedback on the RAP suggested that it could be a systematically viable way to consider the interrelationships of information from multiple sources when making gifted program placement decisions. (Contains 39 references.) (Author/CR)

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An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-Based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students

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September 1995
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THE NATIONAL RESEARCH CENTER ON THE GIFTED AND TALENTED

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ABSTRACT

A Staff Development Model (SDM) and a Research-Based Assessment Plan (RAP) developed by researchers at The University of Georgia were investigated for their potential to improve the identification and education of gifted students from economically disadvantaged families, some of whom may have limited proficiency in the English language. The concept of giftedness as a psychological construct defined by a basic set of traits, aptitudes, and behaviors (TABs) formed the basis of the two models. Overall, the models were perceived as an effective way to (a) improve teachers' ability in observing giftedness in target population student groups, and (b) facilitate the collection and use of information derived from multiple sources when making decisions for program placement and services. A basic implication of this study is that the TABs associated with the giftedness construct appeared to provide a feasible way to train teachers to recognize exceptional ability in target population student groups. Secondly, the SDM and the RAP process appeared to affirm the importance of involving teachers and other staff in the entire process of identifying gifted target students. Finally, feedback on the RAP suggests that the RAP is a viable way to systematically consider the interrelationships of information from multiple sources when making gifted program placement decisions.

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-Based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students[1]

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EXECUTIVE SUMMARY

Introduction

At the top of most lists recounting problems faced in identifying culturally different and economically disadvantaged students are criticisms about test bias and the inappropriateness of relying on standardized tests as the primary identifier of gifted potential. Critics contend that most standardized tests are not designed to evaluate the abilities of culturally different children or children who come from economically disadvantaged families (Baldwin, 1985; Bernal, 1981; Hilliard, 1991) and also do not adequately account for incongruencies between the language of the test giver (or test constructor) and culturally different test takers (Taylor & Lee, 1991).

Teachers may find it difficult to recognize unfamiliar expressions of giftedness when exhibited by children who are different from mainstream children in terms of culture, language, or environment (Baca & Chinn, 1982; Bernal, 1972; Wood & Achey, 1990). When considerations for gifted programs depend on teacher nominations, students are effectively excluded when they are not referred. In fact, as Scott, Perou, Urbano, Hogan, and Gold (1992) noted, regardless of any inadequacies in the assessment process, children who are not referred will never have the opportunity to be selected for gifted programs. Tuliao (1986) found that when teachers were involved in identification processes as members of assessment committees, they positively affected the nomination process in schools that had large populations of students from low socioeconomic status and minority groups. However, Mims (1988) contended that teachers' limited knowledge of gifted characteristics and their low expectations were major deterrents to their referrals of minority students for gifted program participation.

Wiggins (1989) contended that, "When an educational problem persists despite the well-intentioned efforts of many people to solve it, it's a safe bet that the problem hasn't been properly framed" (p. 703). One difficulty in resolving the problems associated with identifying gifted disadvantaged students may have been caused by the complexity of the

[1] While minority group status is not directly implied by this label, because high proportions of economically disadvantaged students are also members of minority groups in this country the two terms are frequently used interchangeably in the literature. As needed, minority and economically disadvantaged will be used in this paper to refer to target students.

issues involved as well as the indiscriminate attention given to cultural, environmental, and social issues when deliberating the identification of gifted target population students. Frasier (1989) observed that

> Probably with no other subpopulation have the definition and identification of giftedness been more complex and seemingly inextricably interwoven with environmental factors, performance on standardized tests, deviation from mainstream cultures, and ambiguous attitudes regarding the degree of academic acuity possessed by Black students. (p. 221)

Finding effective solutions to the identification of gifted target population students is not easy. Gregory (1985) observes that the problems associated with the inadequate identification of gifted minority students are much too complex to be resolved by simply seeking a new assessment instrument. A much more comprehensive approach is needed.

The SDM and the RAP were developed by researchers at The University of Georgia as a comprehensive approach to improving the identification and education of gifted students from economically disadvantaged families and areas, some of whom may have limited proficiency in the English language. Hereafter students in these groups are referred to as the target population.

Purpose of the Study

Training is required to implement any new approach for identifying giftedness in minority or disadvantaged populations. Educators must be prepared to (a) recognize attributes of giftedness in these students, (b) select appropriate assessment measures for appraising these attributes, and (c) use a decision-making process that emphasizes the evaluation of information from multiple sources. The purposes of this exploratory study, thus, were threefold:

1. To pilot the SDM which was designed to provide educators with the information and a process they needed to recognize gifted attributes by target population students.
2. To pilot the RAP which was designed to facilitate the appraisal of exceptional performance by target population students by using multiple information sources based on the core attributes of giftedness.
3. To examine the overall efficiency and effectiveness of the SDM and the RAP in addressing factors affecting the identification of target population students. The results of this investigation would be used to refine the SDM and the RAP.

Research Questions

The following research questions were posed to explore the effectiveness of the SDM and the RAP in facilitating the identification of target population students:

1. Does the SDM provide an effective process to train teachers to better observe and refer target population students for gifted program participation? This question is designed to explore whether teachers who are trained in using the SDM process are able to refer confidently students from the target population for gifted program participation who normally would not have been referred.
2. Does the RAP provide an effective process to facilitate the use of multiple selection criteria in making better professional decisions about the

identification and education of gifted target population students? This question is designed to explore whether the RAP effectively facilitates teachers' ability to use confidently multiple criteria (or data from objective and subjective sources) to make recommendations for placement of target population students in gifted programs.

The SDM and the RAP: Background, Design, and Rationale

The two models used in this investigation were designed to address the question of how to recognize gifted potential in students from diverse environments and cultures by focusing on strategies that emphasize the core attributes of giftedness. The goal was to develop a procedure to improve the methods by which identification and programming for gifted target population students is conducted.

Assumptions Underlying the SDM and the RAP

The basic assumption of the SDM and the RAP was that core attributes of the giftedness construct provided the best foundation for developing procedures to help a school's instructional staff (a) recognize gifted attributes in target population students and (b) give appropriate consideration to cultural, economic, and environmental factors when appraising them for gifted program participation. The following principles underlie this basic assumption:

1. There are core attributes of giftedness that are observable in the performance of children, regardless of economic, cultural, or ethnic backgrounds.
2. Exceptional expressions of these core attributes can be appraised in target students by using a variety of objective and subjective assessment measures.
3. Educators can be trained to use these core attributes as a means of becoming more effective in observing giftedness in target groups.
4. Educators can be trained to use these core attributes to guide the selection of assessment measures.
5. A procedure can be developed wherein all the assessment information collected about target students is used to make decisions for gifted program placement and services.
6. Educational programs can be developed that use assessment information as the basis for addressing the exceptional learning needs of target students.

The Core Attributes of the Giftedness Construct

There are two reasons for viewing giftedness as a psychological construct. One reason comes from the theories and ideas of several researchers and writers who contend that the adequate measure of gifted potential depends on an understanding of the basic attributes associated with the giftedness construct (Bernal, 1980; Culross, 1989; Hagen, 1980; Hoge, 1988, 1989; Hoge & Cudmore, 1986; Leung, 1981). By extension, they also suggest that effective curricula and programs would also reflect primary consideration of the core attributes of giftedness.

This notion of a construct used in this study was explicated by Sax (1980) who defined a construct as a set of hypothesized traits, abilities, or characteristics abstracted from a variety of behaviors presumed to have educational or psychological meaning. A construct, itself, is not directly measurable. Behaviors associated with a construct are measurable. As

Ary, Jacobs, and Razavieh (1979) observed, the sum of the measurement of associated behaviors provides the indirect measure of the construct.

The second reason for focusing on identifying core attributes that underlie the giftedness construct grew out of activities engaged in by researchers at The University of Georgia in the initial planning of a procedure to identify gifted children in the target population. A decision was made to focus on intellectual giftedness and specific academic aptitudes because most school programs are designed to address exceptional abilities in these areas. Two of the intelligences proposed by Gardner (1983)—linguistic and logical-mathematical—were selected as the primary domains to reflect the focus of school programs for gifted students. A succinct list of characteristics of gifted children reported by Gallagher and Kinney (1974) was used as descriptors of the basic abilities associated with these two intelligences.

When we used the two intelligences proposed by Gardner (1983) and the basic gifted abilities outlined by Gallagher and Kinney (1974) to organize the basic meanings of items on various culture-specific checklists, two observations were evident. There appeared to be great similarity in the meanings of items on the various checklists designed to observe gifted potential in the target groups. The checklist items also appeared to reflect the underlying meanings of the gifted abilities proposed by Gallagher and Kinney and appeared to articulate behaviors that students would exhibit when showing ability in either of the two intelligences proposed by Gardner. Further observations suggested that many items on the checklists better described target population students' motivation for intellectual pursuit and their preferred learning environment, learning styles or interests. The reader is referred to Frasier et al. (1995) for a full discussion of the development of the 10 core attributes of giftedness that resulted from further investigations of these similarities and guided the development of the SDM and the RAP.

The Staff Development Model

The Staff Development Model (SDM) is a comprehensive training model designed to provide educators with (a) background information on the concept of giftedness as a psychological construct; (b) an understanding of the set of core traits, aptitudes, and behaviors or TABs associated with the giftedness construct; (c) instructions for observing TABs in the target population student groups; and (d) a procedure to use these TABs to observe and refer students for assessment to determine their participation in their school's gifted program. Vignettes and a series of *Panning for Gold* forms are used to prepare teachers to observe gifted behaviors in target population groups.

The invitational education theory developed by Purkey (Purkey & Novak, 1984) provided the conceptual framework guiding the decision to make classroom teachers the central participants in implementing the SDM. Invitational education theory is based on the principle that people are able, valuable, and responsible individuals who possess relatively untapped potential in all areas of human development. Further, invitational educational theory suggests that policies, places, and programs must be designed to personally and professionally invite people to invite themselves as participants.

The Research-Based Assessment Plan

The Research-Based Assessment Plan (RAP) is an identification system designed to guide the collection and interpretation of data from multiple sources when appraising children's needs for gifted program services. At the heart of the RAP model is the *Frasier Talent Assessment Profile (F-TAP)* (Frasier, 1986). Process and performance information collected on students are plotted using an appropriate scale on the *F-TAP* for interpretation

by a committee. Information that cannot be plotted is recorded in the form of narratives. All the information is examined together when decisions are made for placement.

The *F-TAP* also includes a form for developing an educational plan in four areas, based on the information collected during assessment: (a) programming, (b) curriculum, (c) counseling, and (d) student goals and outcomes. Basic demographic information on students and recommendations for services are also recorded on the *F-TAP*.

No recommendations for participation or services are made until the data collection process is completed. A group decision making process is used in making the recommendations for placement and services. No set cut-off score is ever used. No one piece of information dictates the decision making. The profile of students' abilities and interests guides the development of recommendations for gifted program services.

The RAP process expands the role of teachers by including them in the decision-making process. That is, teachers who referred students were also involved in making decisions about whether students would be assessed further and whether they should be recommended for the gifted program services.

Participants

The SDM and the RAP were piloted in five Georgia school systems and one North Carolina school system. The entire faculty and staff at each of the schools were the participants in this study. A total of 246 teachers participated in the staff development training conducted at each of the participating sites. Of the participants, 66% indicated that they were regular classroom teachers; 3% were administrators; 5% were teachers of the gifted; and 22% were support personnel, e.g., music, art, and physical education teachers or teachers of English as a second language. Of the participants, 26% had 1-5 years of teaching experience; 25% of the teachers had 6-10 years of teaching experience; and 49% had 10+ years of teaching experience. Of the participants, 47% were certified at the bachelor's level; 45% had masters degrees; and 5% had earned a sixth year certificate. In addition, 9% were certified at the doctoral and leadership levels.

The Research Sites

Five school systems in Georgia and one in North Carolina participated in this exploratory study. A total of 17 schools across these sites were involved. The following criteria were used to select the school system:

1. The system was a collaborative school district with The National Research Center on the Gifted and Talented.
2. The system had a strong interest in the project's goals. In addition to their interest, this also meant that the gifted program administrators were willing to secure schools in their district that had the appropriate student population and were willing to get the necessary endorsements from their central administration and/or from the Georgia State Department of Education.
3. The system was in close enough proximity to The University of Georgia to facilitate the collaborations that were necessary with the research staff.
4. The systems served a wide range of ethnic and cultural groups, many of whom were from the target populations that were of interest in this study. One school system had a population that was 95% Native American. It

should be noted that, largely for Hispanics and somewhat for Asians, the number was not as large as the researchers would have liked. This may be due in part to the characteristics of student populations in this region of the country; there are no heavy concentrations of Hispanics and Asians in Georgia schools.

5. The systems provided a variety of administrative arrangements and a good mix of school sizes and geographic locations, ranging from very small to very large; rural, urban, and suburban.

Instruments

Classroom Teacher Instruments

Two instruments were administered to the participants. One instrument—*Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?*—was used to gather information from participants regarding their perceptions of the barriers to identifying target population students for gifted programs. A second instrument, *Session "Feedforward" Instrument,* was used to gather information from participants regarding their understanding of (a) the observation and referral process used in the SDM and (b) the assessment process used in the RAP. In addition, this instrument provided information on the level of commitment that the school system had made to being involved in the exploration of the models.

Instruments Completed By or About Students

Instruments administered to the students were selected if (a) they were a reliable and valid measure of performances related to one or more of the core attributes of giftedness, and (b) they contributed to the development of the desired combination of objective and subjective measures.

The *California Achievement Test (CAT)* (Airasian & Wardrop, 1989) or the *Iowa Tests of Basic Skills* (Lane & Raju, 1992) was selected to provide information on a child's achievement on the reading and math subtest, as one or the other of these tests is routinely used at many of the school sites. When achievement test scores on these measures were not available, the *National Achievement Test* (NAT) (Wick et al., 1990) was administered by the researchers.

The *Children's Language Usage Evaluation Scale (CLUES),* developed by researchers at The University of Georgia, was used to evaluate children's use of written language. The objective was to use a writing sample to assess a student's ability to organize and communicate written responses that demonstrated an understanding of relationships among people, objects, and events. Specific writing element categories measured by *CLUES* are fluency of writing, language usage, story structure, novelty, and personal interpretations.

Developing Cognitive Abilities Test (DCAT) (Wick, Boggs, & Mouw, 1989) was used to assess learning characteristics and abilities that are believed to contribute to academic performance. Because the *DCAT* is not appropriate for very young children (K-2), *The Kuhlmann-Anderson Test* (Kuhlmann & Anderson, 1982) was used as the aptitude measure.

The *Scale for Rating Behavioral Characteristics of Superior Students (SRBCSS)* (Renzulli, Smith, White, Callahan, & Hartman, 1976) was used to collect information from teachers regarding the frequency with which children engaged in relevant learning, motivation, creativity, and leadership activities.

The *School Attitude Measure (SAM)* (Dolan & Enos, 1980) was selected to assess students' attitudes toward school, their view of their academic environment, and their view of themselves as competent students. Because the *SAM* only provides a total score for grades one and two, the *I Feel . . . Me Feel* (Yeatts & Morrison, 1988) was administered to the younger students. Finally, the *Torrance Tests of Creative Thinking (TTCT)*, Figural, Form B (Torrance & Ball, 1984) was used to assess general creative thinking abilities.

Implementation Steps

The Staff Development Model

The presentation of the Staff Development Model (SDM) by The University of Georgia researchers was scheduled at each of the schools in the participating systems during the months of January and February 1992. Site coordinators were given the option of deciding who would participate in the in-service sessions. Some site coordinators chose to involve the entire instructional staff at a school. Other site coordinators chose to use leadership teams who, in turn, trained the instructional staff at their school.

Step 1: Administer the *Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?* This survey assessed current attitudes and beliefs regarding the barriers to identification.

Step 2: Present information on the concept of giftedness as a psychological construct and on the core traits, aptitudes, and behaviors (TABs) associated with this construct. Exemplary vignettes of target population students were used to provide the participants with examples of the TABs exhibited by different children. The vignettes were developed from information generated in a national survey of teachers titled *A Nationwide Survey of the Attributes of Gifted Economically Disadvantaged Students* (Frasier, 1991). Participants were encouraged to contribute vignettes of their own.

Step 3: Explain the observation strategies. The *Panning for Gold* observation and referral forms were introduced. Every effort was made to assure the participants that they were in charge of referring students.

Step 4: Present an overview of the RAP model. The entire assessment process was explained to the participants. This included information on the instruments to be used, how the information gathered would be recorded and interpreted, and how the information would be used to make program and curriculum decisions.

Step 5: Complete the *Session "Feedforward" Form.* This form was used to gather information from the participants regarding their understanding of the SDM and RAP models and their commitment to participate. General information on the quality of the presentation was also collected.

The RAP Model

The following steps describe the process of data gathering, data evaluation, selection of students, and educational program planning. These tasks were completed by researchers

from The University of Georgia and a representative committee of participants at each of the sites.

Step 1: Review referrals to select students for further assessment. A *Panning for Gold* Student Referral Form was completed for each referred student.

Step 2: Administer assessment measures. The University of Georgia researchers administered the *TTCT* because there were few or no trained persons at the participating sites. In addition, researchers provided testing assistance at sites as needed or requested. Local site personnel collected achievement test data, administered the *SRBCSS* and the *CLUES*, collected the referral information from teachers, and scheduled students for assessment.

Step 3: Score assessment measures and plot information on the *F-TAP*. Researchers scored all instruments and plotted the results on the *F-TAP*. Any unusual observation about a student's profile was noted to facilitate decision-making at the school sites.

Step 4: Conduct selection meetings at each site. Researchers met with and served as discussion facilitators with the local school committees who made the placement and program decisions at each of the sites.

Interim Activities

While the SDM was being presented, the assessment measures that would be used were ordered or copied. Assessment information was gathered in six basic areas: (a) aptitude, (b) achievement, (c) creativity, (d) structured observations, (e) language usage, and (f) motivation to achieve. These selected measures reflected a balance of student generated information, test generated information, and information derived from others. The measures were also matched to one or more of the TABs.

Policy Considerations

The principal investigator negotiated an agreement with the Georgia State Department of Education (GSDOE) whereby the selected students would be considered bona fide participants in the state's gifted programs and schools would receive the normal funding for the students that was received for students identified using traditional identification criteria. Further, the GSDOE made a commitment to considering findings from this study in efforts to expand the current test-only criteria.

Results

Results for Research Question 1

Research question 1 asked: Does the SDM provide an effective process to train teachers to better observe and refer target population students? Two sets of evidence were used to address the effectiveness of the SDM: (a) perceptions of the training provided through the SDM and its effectiveness in assisting teachers to make better referrals of target students and (b) the number of target students referred as a result of applying strategies in the SDM who would normally not have been referred.

Perceptions of Training Using the SDM

A total of 246 school instructional staff members completed the "Feedforward" instrument. The first part of this instrument, questions 1 to 6, was concerned with

information about the mechanics of the staff development presentation. The majority of the responses were positive with at least four-fifths of the participants agreeing or strongly agreeing that the objectives were clearly stated; the terms used were clearly defined; the presenters were effective; the handouts and overheads were useful; and the overall directions for using the material were adequate. On-going adjustments were made in the presentation based on evaluations received about the presenters, the material and media used, the structure of the in-service, and the overall content.

Responses to questions 7 through 10 indicated the level of understanding the school's instructional staff was able to achieve about giftedness in target student populations and the intensity of their commitment to participate in this exploratory study. More than four-fifths of the respondents strongly agreed or agreed that the SDM presentation was highly or substantially stimulating; the content of the SDM was extremely or substantially relevant to their job situation, and the information provided was extremely or substantially useful. Ninety-nine percent of the participants agreed to participate in implementing the plan when they indicated that they would actively advocate for potentially gifted students from economically disadvantaged backgrounds. Of the 99%, 79% said they would definitely implement the plan; 20% said they would try.

In questions 11 and 12, participants were asked to evaluate strong points of the presentation and to indicate areas where improvements were needed. Narrative responses (n=573) were analyzed in the two categories that emerged: (a) Presentation (454 comments), and (b) Acquisition of Knowledge (119 comments). The majority of the comments (78%) were positive. That is, 446 of the 573 comments described strong points of the staff development presentation. Only 27% or 127 of the comments referred to areas where improvements were needed.

In addition, meetings were held with site representatives to gather formative and summative information on the implementation of the SDM. Site representatives observed that many of their teachers probably "over-nominated" students for the project because of their keen desire to "do right" by students who, as a group, are so often neglected by our educational system. Teachers did not expect that all the students referred would be selected for program placement. Site representatives also reported that teachers generally expressed an aversion to any use of quotas, but did express strong desires to err on the side of inclusion if there were any signs of exceptional potential.

Number of Students Referred

It was anticipated that approximately 10 to 15 students per site would be referred. However approximately 4 times as many or 341 target population students were recommended for assessment. It was discovered, however, that 14 of these students qualified for gifted program participation according to the traditional criteria used in the state of Georgia. Thus, 327 students were finally referred for assessment. Of the 327 referred students, 60% were African Americans; 9%, Native Americans; 16%, White; and 16%, "Others." The majority of the students referred were elementary (74%). Almost half the referred students were male (47%); a little more than half were female (53%).

Results for Research Question 2

Research question 2 asked: Does the RAP provide an effective process to facilitate the use of multiple criteria in making better professional decisions about the identification and education of target population students? Evidence to address this question was derived from formative and summative feedback on the implementation of the RAP and the performance differences between selected and nonselected students.

A total of 121 students were selected from the 327 students referred for assessment. Of the selected students, 55% were African Americans; 4%, Native Americans; 22%, White; and 18%, "Other." Again, the majority of the students selected were elementary (82%). More female students (59%) than males (41%) were selected.

Students were grouped by program placement status which has two levels: selected and nonselected. Selected means that students were favorably recommended for gifted program participation. Nonselected means that students were not recommended for program participation. In this study, comparisons of performances on standardized measures were only made between selected and nonselected students using an analysis of variance.

***Developing Cognitive Ability Test (DCAT)* Performance**

Significant mean differences were found for program placement status. That is, selected students scored significantly higher than nonselected students on each subtest score and on the total score of the *DCAT*, at the .003 level (Familywise Type I error rate = .05/11).

Bloom's Taxonomy Findings

Only five levels of the Bloom's Taxonomy are used to evaluate students' levels of thinking on the *DCAT*. Students who were selected for placement scored significantly higher than those who were not selected, on all the Bloom's Taxonomy levels except the Knowledge level, at the .01 level (Familywise Type I error rate = .05/5).

***School Attitude Measure (SAM)* Performance**

No significant differences were found for program placement status on any of the five *SAM* subtests (Motivation for Schooling, Academic Self-Concept/Performance Based, Academic Self-Concept/Reference Based, Control Over Performance, and Instructional Mastery). There was also no significant difference found for program placement status on the total score.

***Torrance Tests of Creative Thinking (TTCT)* – Figural, Form B Performance**

A significant difference was found for program placement status only for the Abstractness of Titles score. That is, students who were selected for placement in gifted programs scored significantly higher than those who were not, on Abstractness of Titles, at the .01 level (Familywise Type I error rate = .05/5).

***Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS)* Performance**

A significant difference was found between selected and nonselected students, on the *SRBCSS* Learning subtest, at the .0125 level (Familywise Type I error rate = .05/4). Selected students were observed by their teachers to demonstrate learning characteristics of gifted individuals at a significantly higher level than nonselected students.

Children's Language Usage Evaluation Scale (CLUES)

CLUES was developed by researchers at The University of Georgia to evaluate children's use of language as evidenced in a writing sample. Students generated a writing

sample on a topic of their choice. Points were given each time an element in the following five categories was present in the writing sample:

1. Fluency of Writing: Number of ideas (length), flow of ideas.
2. Language Usage: Verbs, adjectives, precision, picturesque speech.
3. Story Structure: Unusual beginning, unusual dialogue, unusual ending, unusual plot, inclusion of readers.
4. Novelty: Novelty of names, novelty of locale, unique punctuation and expressional devices, novel devices, ingenuity in solving situations, combination of ideas in unusual relationships, humor.
5. Personal Interpretation: Unusual ability to express emotional depth, unusual ability to identify self with others, unusual sensitivity, unique philosophical thinking.

The writing samples were also analyzed for the presence of novelty features such as (a) novelty of ideas, (b) novelty of themes, (c) novelty of form, (d) facility in beautiful writing, and (e) vivid presentation of personal experiences. Additional points were added to the score if these features were present.

Writing samples were available for 196 students (72 of the students selected for program participation and 124 of the students not selected for program participation). Results of the evaluations of stories submitted are summarized by categories.

1. Fluency of writing: Sixty-eight (94%) of the selected students received one or more points for fluency; 119 (96%) of the nonselected students scored one or more points for fluency.
2. Language Usage: Fifty-seven (79%) of the selected students and 86 (69%) of the nonselected student exhibited two or more of the language usage elements in their stories.
3. Story Structure: Forty-six (64%) of the selected and 58 (47%) of the nonselected students exhibited three or more of the story structure elements in their stories plot, inclusion of readers, vitality.
4. Novelty: Forty-two (58%) of the selected students and 48 (39%) of the nonselected students received points for three or more novelty elements in their stories.
5. Personal Interpretation: Thirty-eight (53%) of the selected students and 50 (40%) of the nonselected students included two or more emotional expressive elements in their stories.
6. Optional Features: Twenty-seven (38%) of the stories of selected students and 21(17%) of the stories of the nonselected students included optional features.

Overall, selected students exhibited a more unusual writing or storytelling ability than nonselected. Of the selected students, 10% had two or more elements in the language usage category in their stories than did nonselected students. More of the selected students than the nonselected students had a greater number of elements in their stories in each of the other categories. In fact, in the category of optional features more than 50% of the selected students included at least two or more optional elements in their stories than did nonselected students. The only category in which nonselected students exceeded the performance of selected students was in fluency.[2]

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[2]Contact the first author for complete information on evaluating writing samples using the CLUES.

Implications

Finding an effective way to identify gifted target population students is not easy. Numerous issues intertwine to defy simple solutions to this complex problem that has challenged educators for over 30 years. The purpose of this study was to explore the potential of a staff development model and an assessment model to address comprehensively all of the issues that affect the resolution of the seemingly intractable problems in recognizing the gifted potential of students from economically disadvantaged backgrounds, including those of limited English proficiency. The issues include (a) adequate preparation of teachers to observe the abilities of target students from a proficiency perspective; and (b) facilitation on the collection and use of information derived from multiple sources, objective and subjective, when making professional decisions for placement and services. These issues cannot be addressed without considering barriers created by traditional ways of defining giftedness; current rules and regulations governing the participation of students in gifted programs; negative perceptions about students from economically disadvantaged backgrounds; the lack of confidence in the ability of low income families to nurture the intellectual development of their children; and identification procedures that rely on standardized tests.

Each of these issues was considered in this exploratory study. This action-oriented study took place in six diverse school settings where a number of challenges had to be considered, e.g., scheduling problems, competition with other school-based initiatives, transient students and their families, and different administrative styles. Implications from this study are presented in this section and relate to (a) definition, (b) educator roles, (c) decision-making, and (d) program and curricular adaptation.

The Concept of Giftedness as a Psychological Construct

A basic implication of this study is that considering giftedness as a construct defined by a set of core attributes provides a feasible way to introduce the TABs associated with giftedness to a school's instructional staff. Given the logic of viewing gifted ability as multidimensional, the TABs appeared to provide a promising way to introduce school staff to the discovery of potential in children, regardless of economic status, cultural/ethnic group membership, and language proficiency. The participants in this study were quick to recognize the validity of the TABs as markers of gifted potential when they were presented in the form of vignettes that were closely connected to traditional classroom activities. This understanding was evident in the rapidity with which participants could generate their own vignettes with great confidence in the validity of their observations.

The Role of the Classroom Teachers and Other School Staff

A finding of this exploratory study was the affirmation of the importance of the full involvement of teachers and other school staff in the process of identifying gifted target population students. Since target population students have rarely been selected for gifted program participation, regular educators were the most logical persons to know them best. But these educators need to be empowered to be involved in the entire process of referral, identification, and programming. This is the only way that they can become effective advocates for gifted target population students, a task to which they are fully capable, given appropriate training. Feedback from the participants attests to the value of having teachers involved in the entire observation and identification process. The enthusiasm demonstrated by many of the participants provides some evidence of their potential to become more effective at recognizing gifted potential in target population students, given appropriate training.

The Relation Between Professional Decision Making and the Use of Multiple Criteria

A key objective of the RAP was to replace the emphasis on tests as the primary identifier of gifted potential with an emphasis on effectively using relevant information collected from multiple sources. A willingness to value information from subjective as well as objective sources was critical. It was important that participants saw a need for both types of information to develop a comprehensive picture of students' ability and that they did not feel that either type of information was a substitute for the other.

In addition, an important component of the RAP was the use of a group-oriented decision making process for placement that depended on studying and interpreting the information derived from multiple measures used in constructing the profile. The decision for placement was not based on any one measure; rather, the decision was based on the interaction and complementary nature of the information derived from several sources. The process used was consistent with the basic tenets of expert decision-making theory wherein the interrelationships of information are systematically considered (Wright & Bolger, 1992). Group interactions were relied on to increase judgmental accuracy and confidence (Sniezek & Henry, 1990). Planned follow-up study on the performance of selected students will provide further evaluation of the reliability of placement decisions.

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Table of Contents

ABSTRACT v

EXECUTIVE SUMMARY vii

Introduction 1
- Statement of the Problem 1
- Purpose of the Study 2
- Research Questions 3
- Definitions 3

The Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP): Background, Design, and Rationale 4
- Assumptions Underlying the Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP) 4
- The Core Attributes of the Giftedness Construct 4
- The Staff Development Model (SDM) 7
- The Research-Based Assessment Plan (RAP) 7

Procedures 8
- Participants 8
- Research Sites 8
- Instruments 10
  - Classroom Teacher Instruments 10
    - *Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?* 10
    - *Session "Feedforward" Instrument* 11
  - Instruments Completed by or About Students 11
    - *California Achievement Test (CAT)* 11
    - *Children's Language Usage Evaluation Scale (CLUES)* 12
    - *Developing Cognitive Abilities Test (DCAT)* 12
    - *"I Feel . . . Me Feel"* Self-Concept Instrument 13
    - *Iowa Tests of Basic Skills (ITBS)* 13
    - *Kuhlmann-Anderson Tests* 13
    - *National Achievement Test (NAT)* 13
    - *Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS)* 14
    - *School Attitude Measure (SAM)* 14
    - *Torrance Tests of Creative Thinking (TTCT)*, Figural, Form B 15
- Implementation Steps 15
  - The Staff Development Model (SDM) 15
  - The Research-Based Assessment Plan (RAP) 16
  - Interim Activities 17
  - Policy Considerations 17

Table of Contents (continued)

Results 17
- Results for Research Question 1 17
  - Perceptions of Training Using the Staff Development Model (SDM) 17
  - Number of Students Referred 21
- Results for Research Question 2 21
  - *Developing Cognitive Ability Test (DCAT)* Performance 23
  - Bloom's Taxonomy Findings 23
  - *School Attitude Measure (SAM)* Performance 23
  - *Torrance Test of Creative Thinking (TTCT)*, Figural, Form B Performance 24
  - *Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS)* Performance 24
  - *Children's Language Usage Evaluation Scale (CLUES)* 26

Discussion 27
- Summary 27
- Implications 27
- The Concept of Giftedness as a Psychological Construct 28
- The Role of the Classroom Teachers and Other School Staff 28
- The Relation Between Professional Decision Making and the Use of Multiple Criteria 28

References 31

Appendices 35
- Appendix A: Sample Vignettes 35
- Appendix B: *Panning for Gold* 39
- Appendix C: *Frasier Talent Assessment Profile (F-TAP)* 49
- Appendix D: *Session "Feedforward" Instrument* 55
- Appendix E: *Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?* 59
- Appendix F: *Children's Language Usage Evaluation Scale (CLUES)* 63
- Appendix G: Information Sheets for Participating Teachers and Parents 69
- Appendix H: *Session "Feedforward" Instrument:* Responses to Questions 1-6 73

List of Tables

Table 1 Examples of Similarities Among Gifted Characteristics on Culture-Specific Checklists 6

Table 2 *Session "Feedforward" Instrument:* Subject Responses to Questions 7 to 10 19

Table 3 Distribution of Students Referred for Testing by Ethnicity, Grade, and Gender (N = 327) 22

Table 4 Distribution of Students Selected for Placement in Gifted Program by Ethnicity, Grade, and Gender (N = 121) 22

Table 5 Analysis of Variance for the Subtests and the Total Score of the *Developing Cognitive Abilities Test* by Program Placement Status 23

Table 6 Analysis of Variance for the Bloom's Taxonomy Scores of the *Developing Cognitive Abilities Test* by Program Placement Status 24

Table 7 Analysis of Variance for the Abstractness of Titles Score of the *Torrance Tests of Creative Thinking* by Program Placement Status 25

Table 8 Analysis of Variance on the Subscales of the *Scales for Rating Behavioral Characteristics* by Program Placement Status 25

An Exploratory Study of the Effectiveness of the Staff Development Model and the Research-Based Assessment Plan in Improving the Identification of Gifted Economically Disadvantaged Students[1]

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Introduction

A Staff Development Model (SDM) and a Research-Based Assessment Plan (RAP) model were developed by researchers at The University of Georgia site. These models were designed to improve the identification and education of gifted students from economically disadvantaged families and areas, some of whom may have limited proficiency in the English language. Results from an exploratory investigation on the effectiveness of the SDM and the RAP are presented in this report.

The SDM was based on the notion that regular classroom teachers have the greatest potential to know the abilities of target population students. Finding ways to capitalize on their knowledge of the potential of these children was considered to be critical in this investigation of methods to improve their identification as gifted. The RAP was predicated on a notion that the judicious use of multiple selection criteria should form the basis for assessing the gifts of target population students. Both models were based on the concept of giftedness as a psychological construct and used core attributes of this construct as the foundation for observing, referring, appraising, and making professional recommendations for placement, programs, and services.

Statement of the Problem

At the top of most lists recounting problems faced in identifying culturally different and economically disadvantaged students are criticisms about test bias and the inappropriateness of relying on standardized tests as the primary identifier of gifted potential. Critics contend that most standardized tests are not designed to evaluate the abilities of culturally different children or children who are from economically disadvantaged families (Baldwin, 1985; Bernal, 1981; Hilliard, 1991). Tests are also criticized as not adequately accounting for incongruencies between the language of the test giver (or test constructor) and culturally different test takers (Taylor & Lee, 1991).

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[1] While minority group status is not directly implied by this label, because high proportions of economically disadvantaged students are also members of minority groups in this country the two terms are frequently used interchangeably in the literature. As needed, minority and economically disadvantaged will be used in this paper to refer to target group students.

Teachers may find it difficult to recognize unfamiliar expressions of giftedness when exhibited by children who are different from mainstream children in terms of culture, language, or environment (Baca & Chinn, 1982; Bernal, 1972; Wood & Achey, 1990). When considerations for gifted programs depend on teacher nominations, students are effectively excluded when they are not referred. In fact, as Scott, Perou, Urbano, Hogan, and Gold (1992) noted, regardless of any inadequacies in the assessment process, children who are not referred will never have the opportunity to be selected for gifted programs. Tuliao (1986) found that when teachers were involved in identification processes as members of assessment committees, they positively affected the nomination process in schools that had large populations of students from low socioeconomic status and minority groups. However, Mims (1988) reported that teachers' limited knowledge of gifted characteristics and their low expectations were major deterrents to their referrals of minority students for gifted program participation.

Wiggins (1989) contends that "When an educational problem persists despite the well-intentioned efforts of many people to solve it, it's a safe bet that the problem hasn't been properly framed" (p. 703). Given the persistent underrepresentation of target population students in gifted programs, a plausible assumption may be that the problems in their identification have not been properly conceptualized. One difficulty in conceptualizing the problems may be caused by the complexity of the issues involved. Frasier (1989) observes that "Probably with no other subpopulation have the definition and identification of giftedness been more complex and seemingly inextricably interwoven with environmental factors, performance on standardized tests, deviation from mainstream cultures, and ambiguous attitudes regarding the degree of academic acuity possessed by Black students" (p. 221). Although her reference is to Black students, similar observations have been made about the search for gifted students in other minority groups (Bernal, 1981, 1989; Kirschenbaum, 1988, 1989; Perrine, 1989; Tonemah, 1987).

Finding effective solutions to the identification of gifted target population students is not easy. For example, Gregory (1985) observed that the problems associated with the inadequate identification of gifted minority students are much too complex to be resolved by simply seeking a new assessment instrument. A much more comprehensive approach is needed.

Purpose of the Study

Training is required to implement any new approach for identifying giftedness in minority or disadvantaged populations. Educators must be prepared to (a) recognize attributes of giftedness in these students, (b) select appropriate assessment measures for appraising these attributes, and (c) use a decision-making process that emphasizes the evaluation of information from multiple sources. The purposes of this exploratory study, thus, were threefold:

1. To pilot the SDM which was designed to provide educators with the information and a process they needed to recognize gifted attributes by target population students.
2. To pilot the RAP which was designed to facilitate the appraisal of exceptional performance by target population students by using multiple information sources based on the core attributes of giftedness.
3. To examine the overall efficiency and effectiveness of the SDM and the RAP in addressing factors affecting the identification of target population students. The results of this investigation would be used to refine the SDM and the RAP.

Research Questions

The following research questions were posed to explore the effectiveness of the SDM and the RAP in facilitating the identification of target population students:

1. Does the SDM provide an effective process to train teachers to better observe and refer target population students for gifted program participation? This question is designed to explore whether teachers who are trained in using the SDM process are able to refer confidently students from the target population for gifted program participation who normally would not have been referred.
2. Does the RAP provide an effective process to facilitate the use of multiple selection criteria in making better professional decisions about the identification and education of gifted target population students? This question is designed to explore whether the RAP effectively facilitates teachers' ability to use confidently multiple criteria (or data from objective and subjective sources) to make recommendations for placement of target population students in gifted programs.

Definitions

1. Target Population Students: Target population students for this study are primarily defined by their low socioeconomic status. That is, target population students are defined as students who are eligible for free or reduced lunch. As noted earlier, because a high proportion of minority students and students who have limited proficiency in English are also economically disadvantaged, they are the primary focus of this paper.

2. Assessment: To provide the broader focus needed for this study, the concept of assessment rather than testing was chosen. Assessment refers to the process of gathering information from a variety of sources to make educational decisions about programmatic interventions for children (Hargrove & Poteet, 1984; Luftig, 1989; McReynolds, 1968; Oakland, 1977; Salvia & Ysseldyke, 1988). Typically assessment involves the entire process of referrals, screening, classification, instructional planning, and pupil progress decisions (Nuttall, Romero, & Kalesnik, 1992).

3. Giftedness as a Psychological Construct: The concept of giftedness used in this study is that giftedness is a psychological construct. This conception was derived from Hagen's (1980) observation that giftedness is a psychological construct inferred by observing certain characteristics or behaviors of individuals. The accuracy of these inferences depends on the characteristics or behavior chosen for observation and appraisal.

4. Staff Development: According to Bradley, Kallick, and Regan (1991), the term staff development refers to any systematic attempt to affect the professional practices, beliefs, and understandings of school persons toward an announced goal. Staff development programs are aimed at providing educators with new or reinforced learning, undertaken for the purpose of achieving a goal through the acquisition of relevant skills, knowledge, and understanding. Staff is defined as including any member of the school community. Development refers to continuing growth in skills, knowledge, and understanding.

5. School's Instructional Staff: In this study the more inclusive term, school instructional staff, is used to refer to the classroom teachers who provide instruction in core subject areas as well as to the aides who assist them; special area teachers such as art, music, physical education; media specialists; counselors; administrators; and gifted education specialists.

The Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP): Background, Design, and Rationale

Much of what we know about the identification of gifted target population students has been derived from attempts to manipulate or modify traditional identification procedures. For example, special instruments, scoring methods, or training programs have been designed in attempts to qualify target population students for gifted program participation. Missing in these attempts has been a consideration of the fundamental attributes that underlie the concept of giftedness. Considerations of these fundamental attributes may have important implications for addressing the more important question of how to design procedures that effectively appraise basic gifted potential, regardless of environment and culture. The two models used in this investigation were designed to address the question of how to recognize gifted potential in students from diverse environments and cultures by focusing on strategies that emphasize the core attributes of giftedness, regardless of background.

Assumptions Underlying the Staff Development Model (SDM) and the Research-Based Assessment Plan (RAP)

The basic assumption of the SDM and the RAP is that core attributes of the giftedness construct provide the best foundation for developing procedures to help a school's instructional staff (a) recognize gifted attributes in target population students, and (b) give appropriate consideration to cultural, economic, and environmental factors when appraising them for gifted program participation. The following principles underlie this basic assumption:

1. There are core attributes of giftedness that are observable in the performance of children, regardless of economic, cultural, or ethnic backgrounds.
2. Exceptional expressions of these core attributes can be appraised in target students by using a variety of objective and subjective assessment measures.
3. Educators can be trained to use these core attributes as a means of becoming more effective in observing giftedness in target groups.
4. Educators can be trained to use these core attributes to guide the selection of assessment measures.
5. A procedure can be developed wherein all the assessment information collected about target students is used to make decisions for gifted program placement and services.
6. Educational programs can be developed that use assessment information as the basis for addressing the exceptional learning needs of target students.

The Core Attributes of the Giftedness Construct

There are two reasons for viewing giftedness as a psychological construct. One reason comes from the theories and ideas of several researchers and writers who contend that the adequate measure of gifted potential depends on an understanding of the basic attributes associated with the giftedness construct (Bernal, 1980; Culross, 1989; Hagen,

1980; Hoge, 1988, 1989; Hoge & Cudmore, 1986; Leung, 1981). By extension, they also suggest that effective curricula and programs would also reflect primary consideration of the core attributes of giftedness.

This notion of a construct was explicated by Sax (1980) who defined a construct as a set of hypothesized traits, abilities, or characteristics abstracted from a variety of behaviors presumed to have educational or psychological meaning. A construct, itself, is not directly measurable . Behaviors associated with a construct are measurable. As Ary, Jacobs, and Razavieh (1979) observed, the sum of the measurement of associated behaviors provides the indirect measure of the construct.

Hagen (1980) asserts that giftedness is a psychological construct. As such, accurate inferences about gifted potential depend on the choices made about the characteristics and behaviors to observe and appraise. Bernal (1980) believes that a major problem affecting the referral of minority students for gifted programs is based on the lack of a clear definition of attributes that underlie the giftedness construct. He suggests that by focusing on the core attributes of giftedness, there would be less reason to be bound by the cognitive preferences of one group over another. Culross (1989) agrees when she notes that the lack of consensus regarding what constitutes giftedness may be a primary cause of some of the pitfalls in screening and selecting students for gifted programs.

Leung (1981) suggests that absolute characteristics of giftedness provide an effective way for educators to consider attributes of giftedness in different cultural and economic groups. Absolute aspects, according to Leung, are those traits that symbolize giftedness across different cultural and economic groups. Conversely, specific aspects of giftedness are absolute aspects that have been affected by culture and environment. Leung feels that adequate understanding of specific aspects of giftedness are predicated on clarifying absolute attributes.

Finally, Hoge (1988, 1989), and Hoge and Cudmore (1986) posit that an adequate definition of the giftedness construct is necessary before appropriate selections can be made of measures to assess gifted potential in children. Hoge (1989) observes that, for example, while the formal definition of the giftedness construct incorporates "a broad range of cognitive, motivation, and personality characteristics, gifted children continue to be identified solely on the basis of IQ test performance" (p. 11). He believes that a clear statement specifying the traits, aptitudes, and behaviors associated with the giftedness construct must be decided before making decisions about labels and services.

The second reason for focusing on identifying the core attributes that underlie the giftedness construct grew out of activities engaged in by researchers at The University of Georgia in the initial planning of a procedure to identify gifted children in the target population. A decision was made to focus on intellectual giftedness and specific academic aptitudes because most school programs are designed to address exceptional abilities in these areas. Two of the intelligences proposed by Gardner (1983)—linguistic and logical-mathematical—were selected as the primary domains to reflect the focus of school programs for gifted students. A succinct list of characteristics of gifted children reported by Gallagher and Kinney (1974) was used as descriptors of the basic abilities associated with these two intelligences.

When we used the two intelligences proposed by Gardner (1983) and the basic gifted abilities outlined by Gallagher and Kinney (1974) to organize the basic meanings of items on various culture-specific checklists, two observations were evident. There appeared to be great similarity in the meanings of items on the various checklists designed to observe for gifted potential in the target groups. The checklist items reflected the underlying

meanings of the gifted abilities proposed by Gallagher and Kinney, and illustrated behaviors that students would exhibit when showing ability in either of the two intelligences proposed by Gardner. An example of the relationship among items that led to this observation is illustrated in Table 1.

Further observations suggested that many items on the checklists better described target population students' motivation for intellectual pursuit and their preferred learning environment, learning styles, or interests. The reader is referred to Frasier et al. (1995) for a full discussion of the development of the 10 core attributes of giftedness that grew out of these observations. These core attributes are referred to as traits, aptitudes, and behaviors (TABs). They eventually led to the development of the SDM and the RAP.

Table 1

Examples of Similarities Among Gifted Characteristics on Culture-Specific Checklists

Category of Giftedness	Generic Indicator	Relevant Checklist Indicator
Linguistic (Gardner, 1983)	Meaningfully manipulates some symbol system (Gallagher & Kinney, 1974)	• Expressive speech (Torrance, 1977) • Uses words to express thought and meaning (Tonemah, 1987) • Speaks correctly with good grammar for his/her age (Bernal, 1974) • Can talk more than one way (can talk proper, everyday talk, talk to different groups) (Hilliard, 1976)
Logical-Mathematical (Gardner, 1983)	Extends or extrapolates knowledge to new situations of unique applications (Gallagher & Kinney, 1974)	• Innovative use of common materials (Torrance, 1977; Tonemah, 1987) • Invents ways to make improvements to things or ways of doing things (Tonemah, 1987) • Figures out things or works on problems and finds solutions which other kids probably are unable to do (Bernal, 1974)

The Staff Development Model (SDM)

The invitational education theory developed by Purkey (Purkey & Novak, 1984), and notions embodied in the concept of teacher empowerment (Maeroff, 1988; Powell & Solity, 1990) provided the conceptual framework for the SDM. Essentially the principles of invitational education imply that people are able, valuable, and responsible individuals who possess relatively untapped potential in all areas of human development. This potential is best developed through the implementation of policies, places, and programs designed to personally and professionally invite people to invite themselves as participants. When applied in the development of the SDM, this principle represented the intent to invite teachers to become active participants in the identification of gifted target population students.

Teachers must become more empowered as effective members of the team making professional decisions for services if they are to assume the role of talent scouts. The concept of empowerment refers to the development of a sense of self-efficacy and confidence so that teachers can exercise their craft in a professionally responsible way (Maeroff, 1988; Powell & Solity, 1990). Applying the concept of empowerment in the context of the SDM specifically means that teachers are not only invited to participate in the process of identifying gifted target population students, they are also empowered to participate as an integral part of the team making the professional recommendations about placement in gifted programs.

The SDM provides educators with (a) background information on the concept of giftedness as a psychological construct; (b) an understanding of the set of core traits, aptitudes, and behaviors or TABs associated with the giftedness construct; (c) instructions for observing TABs in the target population student groups; and (d) a procedure to use these TABs to observe and refer students for assessment to determine their participation in their school's gifted program. Vignettes[2] and a series of *Panning for Gold* Forms are used to prepare teachers to observe gifted behaviors in target population groups. A sample of the vignettes used in implementing the SDM are provided in Appendix A. The *Panning for Gold* series of forms are provided in Appendix B.

The Research-Based Assessment Plan (RAP)

The RAP is an identification system designed to guide the collection and interpretation of data from multiple sources when appraising children's needs for gifted program services. At the heart of the RAP is the *Frasier Talent Assessment Profile (F-TAP)* (Frasier, 1986). Process and performance information collected on students are plotted using an appropriate scale on the *F-TAP* for interpretation by a committee. Information that cannot be plotted is recorded in the form of narratives. All of the information is examined together when decisions are made for placement. (See Appendix C for a copy of *F-TAP*.)

The *F-TAP* also includes a form for developing an educational plan in four areas based on the information collected during assessment: (a) programming, (b) curricula, (c) counseling, and (d) student goals and outcomes. Basic demographic information on students and recommendations for services are also recorded on the *F-TAP*.

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[2] The vignettes were derived from a national survey conducted to collect teacher descriptions of bright children from economically disadvantaged backgrounds. For a full report on this survey see Frasier (1991) and Thomas (1991).

No recommendations for participation or services are made until the data collection process is completed. A group decision making process is used in making the recommendations for placement and services. No set cut-off score is ever used. No one piece of information dictates the decision making. The profile of students' abilities and interests guides the development of recommendations for gifted program services.

The RAP process was designed to expand the role of teachers by including them in the decision-making process. That is, teachers who referred students were also involved in making decisions about whether they would be assessed further and whether they should be recommended for the gifted program services.

Procedures

The procedures used in this exploratory study to investigate the effectiveness of the SDM and the RAP are presented in this section. The participants and the research sites are described. Steps followed in implementing the staff training and collecting assessment data are outlined. Information is also provided about the instruments that were administered to the teachers and the students, and the methods used to analyze data.

Participants

The SDM and the RAP were piloted in five Georgia school systems and one North Carolina school system. The entire faculty and staff at each of the schools in the participating systems were participants for this study. These faculty and staff were involved in the staff development and assessment process according to the procedure adopted by the site coordinator. That is, at some of the sites the school's instructional staff was trained by researchers from The University of Georgia. At other sites, the researchers trained a team selected by the site coordinator. This team, in turn, provided the training for the instructional staff at the participating site.

A total of 246 teachers participated in the staff development training conducted at each of the participating sites. Of the participants, 66% indicated that they were regular classroom teachers; 3% were administrators; 5% were teachers of the gifted; and 22% were support personnel such as music, art, and physical education teachers or teachers of English as a second language. Of the teachers participating in the staff development training, 4% did not indicate the position they held at their school. Of the participants, 26% or 63 had 1-5 years of teaching experience; 25% or 61 had 6-10 years of teaching experience; and 49% had 10+ years of teaching experience. Of the teachers, 47% were certified at the bachelor's level; 45% had master's degrees; and 5% had earned a sixth year certificate. In addition, 9% were certified at the doctoral and leadership levels.

Research Sites

Six school systems in Georgia and one in North Carolina comprised the original group of schools that participated in this exploratory study. One of the Georgia sites dropped out of the project because of difficulties encountered in collecting the required information. The following criteria were used to select the school system:

1. The system was a collaborative school district with The National Research Center on the Gifted and Talented.
2. The system had a strong interest in the project's goals. In addition to their interest, this also meant that the gifted program administrators were willing

to secure schools in their district that had the appropriate student population and were willing to get the necessary endorsements from their central administration and/or from the Georgia State Department of Education.

3. The system was in close enough proximity to The University of Georgia to facilitate the collaborations that were necessary with the research staff.
4. The systems served a wide range of ethnic and cultural groups, many of whom were from the target populations that were of interest in this study. One of the school systems had a population that was 95% Native Americans. It should be noted that, largely for Hispanics and somewhat for Asians, the number was not as large as the researchers would have liked. This may be due in part to the characteristics of student populations in this region of the country; there are no heavy concentrations of Hispanics and Asians in Georgia schools.
5. The systems provided a variety of administrative arrangements and a good mix of school sizes and geographic locations, ranging from very small to very large; rural, urban, and suburban.

Across the sites, a total of 17 schools participated. A description of each site follows.

School System A is an urban school system located in approximately the middle of the state of Georgia. The total student population is 24,375. Of that population, 38% are White and 62% are African Americans. Hispanics, Asian/Pacific Islanders, and American Indians or Alaskan Natives make up less than 1% each. This school system consists of 30 elementary schools, 4 middle schools, and 4 high schools. Two of the elementary schools were selected for participation in this study. Both had large minority enrollments; one was classified as a Title 1 school.

School System B is a private, rural reservation school located in North Carolina. Of the school system's total student population of 995, 5% are White and 95% are American Indians. The median family income is in the low socioeconomic (SES) range. At the time the exploratory study was initiated, 21 students were being served in the system's gifted program; 7 students were in the process of being evaluated. This school system consists of 1 elementary school, 1 middle school, and 1 high school, all of which participated in this study.

School System C serves approximately 10,800 students with 25% living in rural areas, 35% in suburban areas, and 40% in urban areas. Of the students, 51% are African American, 46% are White, 1% Hispanic, 1.5% Asian/Pacific Islanders, and 5% American Indians or Alaskan Native. Of the families, 14% are classified as high SES, 61% medium SES, and 25% low SES. The county in which the school system is located derives a large part of its economic base from the local university. Three of the system's 13 elementary schools participated in this study.

School System D serves about 42,000 inner city, rural, and suburban students. Some of the students served are bilingual. The student enrollment consists of 42% African Americans, 54% Whites, 2% Hispanics, 3% Asian/Pacific Islanders, and .07% American Indian/Alaskan Native. Two middle schools were chosen for participation because of their diversity.

School System E is located in a large suburban community that is adjacent to a major metropolitan center. District wide, this system serves approximately 65,000 students. Of the students, 90% are White, 5% are African Americans, 2% are Hispanic, 3% are Asian/Pacific Islanders, and .5% are American Indian/Alaskan Natives. Approximately

6,500 students are served in the system's gifted program. This system was chosen because of its growing English as a Second Language (ESL) population. Two elementary schools with large ESL populations were chosen to participate in this study.

School System F is located in rural, south central Georgia. The school system serves a total of 1,800 students, K-12 in three elementary schools and one comprehensive middle/high school. The majority of the students are on free or reduced lunch. The four schools in this school system participated in this study.

Instruments

Instruments used in this study are described in this section. The section is divided into two parts. In Part I the instruments administered to the school's instructional staff at the participating schools are described. In Part II the instruments administered to students who were referred for placement are described.

Classroom Teacher Instruments

Two instruments were administered to the participants. One instrument, *Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?*, was used to gather information from participants regarding their perceptions of the barriers to identifying target population students for gifted programs. A second instrument, *Session "Feedforward" Instrument* (see Appendix D), was used to gather information from participants regarding their understanding of (a) the observation and referral process used in the SDM, and (b) the assessment process used in the RAP. In addition, this instrument provided information on the level of commitment that the school system had made to being involved in the exploration of the models.

Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?

This 10-item survey was developed to examine educators' perceptions of the critical barriers affecting the identification of gifted target population students. Results from this survey were not used to evaluate the effectiveness of the SDM and the RAP. Rather they were used to adjust the training materials to focus more clearly on the barriers that were considered by the participating staff to be most serious.

The literature on gifted minority and poor students comprised one source for the items that were used to develop this survey. This review of literature revealed several recurring problems related to language, home environments, teacher expectations, and testing that had been discussed as contributors to the underrepresentation of target population students in gifted programs. The other source of information for the survey items was the professional and personal experiences of The University of Georgia researchers. These researchers have had extensive experience over the last thirty years as regular classroom teachers, gifted program teachers, teacher trainers, and gifted and special education consultants. In addition each was a member of one of the groups identified as the target population for this study. Their professional and personal experiences were combined with information gleaned from the literature to develop and refine the survey items. There was consensus that the 10 items selected reflected the most frequently cited barriers to the identification of gifted target population students.

Participants indicated their perceptions about the issues reflected in the ten items on a 5-point Likert scale. Response possibilities ranged from 1 meaning "Strongly Agree" to 5 meaning "Strongly Disagree." A copy of the survey is provided in Appendix E. The survey was administered prior to beginning the first staff development training session at each site.

Participants were told that the purpose of the survey was to find out what their perspectives were on the problems encountered in identifying gifted target population students.

Session "Feedforward" Instrument

File copies of various session evaluation instruments collected over the years by the principal investigator were reviewed for examples of typical items used to evaluate educational presentations. Literature on staff development was also reviewed for items that reflected current goals of staff development programs. In addition, faculty in the Department of Educational Leadership at The University of Georgia were consulted regarding the development of the items.

The *Session "Feedforward" Instrument* consists of 12 items. The first six are traditional items used to evaluate educational presentations. This information was primarily used by the researchers to adjust any conditions in subsequent presentations related to the use of visuals and handouts, the effectiveness of presenters, and the clarity with which the material was presented.

Questions 7 through 10 were concerned with judging the degree of commitment participants made to participating in the project. Participants were asked to indicate the degree to which they were stimulated and motivated by the session and how relevant and useful or practical they found the information presented. The last two items asked for (a) an appraisal of strong points of the overall presentation and (b) "feedforward" suggestions on how to make subsequent presentations more effective. Information from this instrument was used to make ongoing modifications in the staff development procedures and content and to evaluate the effectiveness of the SDM and the RAP from the perspective of classroom teachers.

Instruments Completed by or About Students

Instruments administered to the students were selected if (a) they were a reliable and valid measure of performances related to one or more of the core attributes of giftedness, and (b) they contributed to the development of the desired combination of objective and subjective measures.

The instruments are presented in alphabetical order. The *California Achievement Test (CAT)* and the *Iowa Tests of Basic Skills (ITBS)* are used routinely by many of the schools sites. The *National Achievement Test (NAT)* was administered by the researchers only if scores on the *CAT* and the *ITBS* were not available.

California Achievement Test (CAT)

The *CAT* (Airasian & Wardrop, 1989) measures achievement in basic academic skills: reading language expression, mathematics concepts, math applications, mathematics computation, spelling, science, social studies, and study skills. In this study, only the scores for reading, language expression, math concepts, math applications, and total battery scores were used. The test has a multiple-choice format and 11 levels for use with grades K-12. The scores reflect the total number correct in each content area and for the total battery. Scores are reported as national percentiles, national stanines, grade equivalents, normal curve equivalents, scale scores, and number of objectives mastered.

The *CAT* was standardized in 1984 and 1985 using a public school sample stratified by geographic region, community (urban, suburban, rural), and size of district. The Kuder-Richardson 20 formula was used to determine reliability of the subtests and total battery. Coefficients, which ranged from high .60's to .95 were reported by level.

Children's Language Usage Evaluation Scale (CLUES)

CLUES was developed by researchers at The University of Georgia to evaluate children's use of written language. The objective was to use a writing sample to assess a student's ability to organize and communicate written responses that demonstrated an understanding of relationships among people, objects, and events.

Students generated writing samples on a topic of their choice. Possible story starters or topics were suggested as follows: (a) the tricky cat; (b) unwelcome visitor; (c) golden dragon; (d) most embarrassing moment; (e) an event I'll never forget; (f) my most frightening experience; and (g) one of the funniest (saddest, strangest, etc.) things I've ever seen. Several prewriting activities were suggested as warm-ups.

The abilities that were of interest included expressions of feelings, judgments and causality, comprehension of complex situations, and uncommon descriptions of behaviors, attributes, and actions. Mechanics and grammar were not evaluated. Specific writing elements measured by *CLUES* are fluency of writing, language usage, story structure, novelty, and personal interpretations. A copy of *CLUES* is provided in Appendix F.

Points are given based on whether or not an element is present in the writing sample. Additional points are given if the writing sample contains any of five optional features: novelty of idea, novelty of theme, novelty of form, facility in beautiful writing, and vivid presentation of personal experience. Inter-rater reliability, at a level of .90, was established for the evaluators of the writing samples.

Developing Cognitive Abilities Test (DCAT)

The *DCAT* (Wick, Boggs, & Mouw, 1989) assesses learning characteristics and abilities that are believed to contribute to academic performance. There are eight levels of this test, designed for use with grades 1 through 12. Each level uses a multiple choice format and 81 items are evenly divided among three content areas: (a) Verbal Ability, (b) Quantitative Ability, and (c) Spatial Ability. Bloom's Taxonomy provides the conceptual framework for test items. Within each content area, the first nine items assess basic cognitive abilities, the second set of nine items assesses application abilities, and the last nine items assess critical thinking. Scores are reported for five of the thinking skill areas in the Bloom's Taxonomy: (a) knowledge, (b) comprehension, (c) application, (d) analysis, and (e) synthesis.

Scores for the three content areas are reported as national percentiles, normal curve equivalents, stanines, equal interval scores, and cognitive ability indicators. The scores on the Bloom's Taxonomy are reported according to the average percent of questions (on each of the three subscales) the student gets correct. The report also compares the average percent correct with the national average percent correct for the respective grade level (average percent correct difference).

The *DCAT* was developed in 1988 using a stratified, multi-stage national probability sample of kindergarten to twelfth grade students in public and parochial schools. Depending on grade, reliability (KR-20) for the total *DCAT* ranges between .88 and .96 (Aylward, 1992). The figures for the individual content and thinking skills areas are lower, but still within an acceptable range. Subscale scores of the *DCAT* were correlated with the reading, language, mathematics, social studies, and science scores on the *National Achievement Test* (Wick et al., 1990). The correlation coefficients ranged from .70 to .85 (Wick, Boggs, & Mouw, 1989).

"I Feel . . . Me Feel" Self-Concept Instrument

The *"I Feel . . . Me Feel"* (Yeatts & Morrison, 1988) self-concept measure is a 40 item self-report instrument designed to assess young children's underlying structure of self-feeling. It is appropriate for use with children in grades K through 4. Each item is read out loud by the test administrator (usually the classroom teacher). The children respond by coloring in the face (sad, not sad-not happy, or happy) that best shows how they feel about the item. A factor analysis (N = 25,322) identified five factors: (a) Academic, (b) Self, (c) Frustration, (d) Fun, and (e) Independence. The recommended scoring procedure is to sum the numeric value of the responses to the items associated with each factor.

The split-half method of determining internal test consistency resulted in a correlation coefficient of .86 across all grades (Yeatts & Morrison, 1988). Test-retest reliability coefficients were calculated for each grade and ranged from .78 to .84. Construct validity was explored by correlating the total scores on the *"I Feel . . . Me Feel"* with scores on the *Metropolitan Readiness Test* (for kindergartners) and on the *California Achievement Test* (for first through fourth graders). The correlation coefficients ranged from a low of .68 for kindergartners to a high of .81 for fourth graders.

Iowa Tests of Basic Skills (ITBS)

The *ITBS* (Lane & Raju, 1992) is a traditional group measure of achievement used with children in grades K through 9. It uses a multiple-choice format and assesses growth in seven general cognitive skill areas. The subscales used in this study were Mathematics Concepts, Mathematics Problems, and Reading. Internal-consistency reliability coefficients are above .85. The equivalent form reliability coefficients for the scales used in this study range from .70 to .90.

Kuhlmann-Anderson Tests

The *Kuhlmann-Anderson Tests* (Kuhlmann & Anderson, 1982) provide an assessment of academic potential by measuring cognitive skills related to the learning process. There are seven levels of the test for use with grades K through 12. Each level has two subtests, Verbal and Nonverbal. The *Kuhlmann-Anderson Tests* were given only to kindergarten children in this study. Form K, for kindergartners, has 80 multiple-choice items. The raw score, basic growth measure standard score, cognitive skills quotient estimates (CSQ), national percentile (using age and grade-related norms), and national stanines (using age and grade-related norms) are reported for the full test. The raw score and CSQ score are reported for the verbal and nonverbal subtests. Full test and subtest internal consistency for form K, determined by using the Kuder-Richardson Formula 10, are .91 (full test and CSQ score), .81 (verbal subtest, CSQ score), and .88 (nonverbal, CSQ score).

National Achievement Test (NAT)

The *NAT* (Wick et al., 1990) is a group measure of achievement in areas commonly found in school curricula. There are 12 test levels for use with grades K-12. Composed of 184 to 419 multiple-choice items, different levels of the *NAT* use various combinations of the following subscales: Reading (vocabulary, comprehension, and total), Language (spelling mechanics, expression, and total), Mathematics (computation, concepts/problem solving, and total), Word Attack, Social Studies, Science, Reference Skills, Basis Battery Total. The subscales used in this study were Reading Comprehension, Language Expression, and Mathematics Concepts/Problem Solving. Percentile rank, grade equivalents, equal interval scores, stanines, and normal curve equivalents are reported for each subscale and the Basic Battery Total.

The correlation coefficients between the subtests and the total score range from a low of .45 to .75 for grades K through 1 to a high of .55 to .95 for grades 5 through 7. The

internal-consistency reliability (KR-20) ranges from the high .80's to low .90's for all subject areas and test levels.

Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS)

The *SRBCSS* (Renzulli, Smith, White, Callahan, & Hartman, 1976) was developed to facilitate teachers' observations of the frequency in which students demonstrated typical behaviors associated with gifted individuals. Ten separate scales make up the complete *SRBCSS*, four of which were used in this study: (a) Learning, (b) Motivation, (c) Creativity, and (d) Leadership. Each scale consists of 8 to 10 items to which the teacher makes one of four possible responses: (a) seldom or never, (b) occasionally, (c) considerably, or (d) almost always. The numeric value (1 to 4) of the responses are summed for the items in the scale to obtain a total score for each scale.

Reliability coefficients were determined by having two sets of teachers rate the same fifth-and sixth-grade students after a 3-month interval. Statistically significant correlation coefficients ranged from .77 on the Leadership Scale to .91 on the Motivation Scale. Interjudge reliability coefficients ranged from a low of .67 on the Leadership Scale to a high of .91 on the Creativity Scale (Renzulli et al., 1976).

Renzulli, et al. (1976) also examined the validity of the four scales by comparing them with relevant standardized measures. The validity of the Learning and the Motivation scales was determined by comparing ratings on these scales with scores on standardized intelligence and achievement tests. A significant correlation of .61 was found for the Learning scale; a significant correlation of .36 was found for the Motivation scale. The validity of the Leadership Scale was determined by correlating teachers' ratings with sociometric peer ratings. The correlation coefficients were significant and high between the scale and peer rating for fourth and fifth grade students (ranging from .75 to .84) but considerably lower for sixth graders (.23 to .35).

School Attitude Measure (SAM)

Developed by Dolan and Enos (1980), the *SAM* assesses students' attitudes toward school, their view of their academic environment, and their view of themselves as competent students. There are five subscales: (a) Motivation for Schooling, (b) Academic Self-Concept—Referenced Based, (c) Academic Self-Concept—Performance Based, (d) Student's Sense of Control over Performance, and (e) Students' Instructional Mastery. The Motivation for Schooling score indicates the students' attitude about school work and environment. The two Academic Self-Concept scores indicate the students' feelings about their ability. The Performance Based scale indicates how they personally feel about their ability and the Reference Based scale indicates what they think others (teachers, family, and peers) feel about their ability. The Control Over Performance scale indicates where the students place responsibility for their success or failure. Instructional Mastery indicates how the students feel about their ability to understand and master the concepts taught in school. The total score is an average of the above scales.

There are five forms of the *SAM* for use with grades 1 through 12. The number of items ranges from 40 (grades 1 and 2) to 100 (grades 9 through 12). The response choices for students in the first and second grade are "Yes" and "No." On the other four forms, the choices are "never agree," "sometimes agree," "usually agree," and "always agree." Scores are computed for each subscale by adding up the numeric value (1 to 4) for responses for each item. A total score is obtained by summing the subscale scores. Percentile scores and equal interval scale units are reported for each subscale and the total.

The standardization sample for the *SAM* consisted of 90,000 kindergarten to twelfth grade students, stratified according to geographic region, school district size, and

socioeconomic status. No ethnic, gender, socioeconomic, cultural, or regional biases were found. Internal consistency (KR-20) coefficients were determined for each subtest by grade. The correlations ranged from .68 to .80 (Dolan & Enos, 1980).

Torrance Tests of Creative Thinking (TTCT), Figural, Form B

The *TTCT* (Torrance & Ball, 1984) assesses general creative thinking abilities. The five norm-referenced dimensions measured by the *TTCT* are: (a) Fluency, (b) Originality, (c) Abstractness of Titles, (d) Elaboration, and (e) Resistance to Premature Closure. The Fluency score represents the ability to respond to a variety of stimuli in various ways and the Originality score represents an individual's ability to break away from commonplace ideas and respond in new and original ways. Higher level thinking skills and the use of symbolic meanings are represented by the Abstractness of Title score. The Elaboration score estimates an individual's ability to add details beyond a minimum response and the Resistance to Premature Closure score represents an individual's ability to keep an open mind long enough to make a mental leap to new ideas.

Thirteen criterion-referenced creative strengths are also measured by the *TTCT:* (a) emotional expressiveness, (b) storytelling articulateness, (c) movement or action, (d) expressiveness of titles, (e) synthesis of incomplete figures, (f) synthesis of lines or circles, (g) unusual visualization, (h) internal visualization, (i) extending or breaking boundaries, (j) humor, (k) richness of imagery, (l) colorfulness of imagery, and (m) fantasy.

A creativity index score is derived by adding scores from the criterion referenced creative strengths to the scores on the five norm-referenced dimensions of creativity. Raw scores, national percentile ranks, local percentile ranks, and standard scores are provided for the five norm-referenced scores. The degree of presence of a creative strength is indicated by one or two "+" signs next to that strength.

Reliability scoring studies of the *TTCT* have indicated that it is possible to keep the scoring reliability of the five norm-referenced dimensions and the 13 criterion referenced dimensions above the .90 level. Predictive validity studies of the measures of the Fluency, Originality, and Elaboration scores yielded significant validity coefficients of .51 for the total sample, .50 for males, and .43 for females. Predictive validity studies yielded significant validity coefficients for the following creative strengths: emotional expressiveness (.55), storytelling articulateness (.49), movement or action (.49), synthesis of circles (.22), unusual visualization (.44), internal visualization (.60), extending or breaking boundaries (.59), humor richness/colorfulness of imagery (.71), and fantasy (.45).

Implementation Steps

The Staff Development Model (SDM)

The presentation of the SDM by The University of Georgia researchers was scheduled at each of the schools in the participating systems during the months of January and February 1992. Hereafter, The University of Georgia researchers will be referred to as the researchers. Site coordinators were given the option of deciding who would participate in the training. Some chose to involve the entire instructional staff; others chose to use a leadership team who would, in turn, train the rest of the instructional staff at their school.

Step 1: Administer the *Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?* This survey assessed current attitudes and beliefs regarding the barriers to identification.

Step 2: Present information on the concept of giftedness as a psychological construct and the TABs associated with this construct. Exemplary vignettes of target population students were included to provide the participants with examples of the TABs exhibited by different children. Participants were encouraged to contribute vignettes of their own.

Step 3: Explain the observation strategies. The *Panning for Gold* observation and referral forms were introduced. Every effort was made to assure the participants that they were in charge of referring students.

Step 4: Present an overview of the RAP. The entire assessment process was explained to the participants. This included information on the instruments to be used, how the information gathered would be recorded and interpreted, and how the information would be used to make program and curriculum decisions.

Step 5: Complete the *Session "Feedforward"* Form. The primary purpose for this form was to gather information from the participants regarding their understanding of the SDM and the RAP and their commitment to participate. General information on the quality of the presentation was also gathered.

The Research-Based Assessment Plan (RAP)

The following steps describe the process of data gathering, data evaluation, selection of students, and educational program planning. These tasks were completed by researchers from The University of Georgia and a representative committee of participants at each of the sites.

Step 1: Review referrals to select students for further assessment. A *Panning for Gold* Student Referral Form was completed for each referred student.

Step 2: Administer assessment measures. The University of Georgia researchers administered the *TTCT* because there were few or no trained persons at the participating sites. In addition researchers provided testing assistance at sites as needed or requested. Local site personnel collected achievement test data, administered the *SRBCSS* and the *CLUES*, collected the referral information from teachers, and scheduled students for assessment.

Step 3 Score assessment measures and plot information on the *F-TAP*. Researchers scored all instruments and plotted the results on the *F-TAP*. Any unusual observations about a student's profile was noted to facilitate decision-making at the school sites.

Step 4: Conduct selection meetings at each site. Researchers met with and served as discussion facilitators with the committees who made the placement and program decisions at each of the sites. Because of the extended assessment period necessitated by the large number of students referred and other conflicts with school events, these meetings were delayed and were not completed until the fall of 1992, not May 1992 as anticipated. Nine review and selection meetings were held in July and August 1992, and 7 were held in September 1992.

Interim Activities

While the SDM was being presented, decisions about the assessment measures that would be used were ordered or copied. Assessment information was gathered in six basic areas: (a) aptitude, (b) achievement, (c) creativity, (d) structured observations, (e) language usage, and (f) motivation to achieve. The measures reflected a balance of student generated information, test generated information, and information derived from others. The measures were also matched to one or more of the TABs.

Consent forms were prepared to acquire permission to test from parents of referred students. In addition two information sheets, one for teachers and one for parents, were developed to provide them with responses they might make to any questions raised about the project. Copies of these information forms are provided in Appendix G.

Policy Considerations

Several policies were considered in the conduct of this study. The first related to achieving a waiver for the participation of students who would not normally be eligible for gifted program services in Georgia. This was not an issue for the North Carolina site since they operated as a private entity. The second related to the status of identified students in the gifted program. The third policy related to the provision of additional staff as needed and reimbursements to be received by school districts that were being asked to accommodate an increased number of students in their gifted programs.

The principal investigator negotiated an agreement with the Georgia State Department Of Education (GSDOE) whereby the selected students would be considered bona fide participants in the state's gifted programs and schools would receive the funding for the students that was received for students identified using traditional identification criteria. Further, the GSDOE made a commitment to consider findings from this study in efforts to expand the current test-only criteria to allow the use of multiple criteria to identify children for gifted program participation.

Results

Results for Research Question 1

Research question 1 asked: Does the SDM provide an effective process to train teachers to better observe and refer target population students? Two sets of evidence were used to address the effectiveness of the SDM: (a) perceptions of the training provided through the SDM and its effectiveness in assisting teachers to make better referrals of target students, and (b) the number of target students referred as a result of applying strategies in the SDM who would normally not have been referred.

Perceptions of Training Using the Staff Development Model (SDM)

A total of 246 school instructional staff members completed the *"Feedforward"* instrument. The first part of this instrument, questions 1 to 6, was concerned with information about the mechanics of the staff development presentation. The majority of the responses were positive with at least four-fifths of the participants agreeing or strongly agreeing that the objectives were clearly stated; the terms used were clearly defined; the presenters were effective; the handouts and overheads were useful; and the overall directions for using the material were adequate (see Appendix H). On-going adjustments were made

in the presentation based on evaluations received about the presenters, the material and media used, the structure of the inservice, and the overall content.

Responses to questions 7 through 10 indicate the level of understanding the school's instructional staff was able to achieve about giftedness in target student populations and the intensity of their commitment to participate in this exploratory study. A summary of responses to questions 7 through 10 is provided in Table 2. More than four-fifths of the respondents strongly agreed or agreed that the SDM presentation was highly or substantially stimulating; the content of the SDM was extremely or substantially relevant to their job situation, and the information provided was extremely or substantially useful. Of the participants, 99% agreed to participate in implementing the plan when they indicated that they would actively advocate for potentially gifted students from economically disadvantaged backgrounds. Of the 99%, 79% said they would definitely implement the plan; 20% said they would try.

In questions 11 and 12, participants were asked to evaluate strong points of the presentation and to indicate areas where improvements were needed. Narrative responses (N=573) were analyzed in the two categories that emerged: (a) Presentation (454 comments), and (b) Acquisition of Knowledge (119 comments). The majority of the comments (78%) were positive. That is, 446 of the 573 comments described strong points of the staff development presentation. Only 27% or 127 of the comments referred to areas where improvements were needed.

Three themes emerged within the category of Acquisition of Knowledge from an analysis of responses to questions 11 and 12: (a) Knowledge Learned (88), (b) Local Relevance (16), and (c) Teacher Involvement (15). A majority of the comments in the Knowledge Learned category were positive and indicated that the participants (a) had learned a new way of identifying gifted children, (b) were more aware of the reasons why gifted children get overlooked, (c) understood how gifted children are currently chosen for program participation, (d) understood the need for a broadened view of the abilities of all students, and (e) understood the purpose of and role they would play in the study.

Examples of responses leading to these conclusions were:

"We have to look at all the student qualities, not just test scores" (06-02-60)[3].
"Teachers' perceptions of ability need to be challenged, rechanneled, and expanded" (02-00-23).
"Giftedness comes in many forms" (06-01-26).

Sixteen comments made were related to local relevance. Examples of these comments were:

"Very appropriate for our population" (06-02-08).
"This presentation was relevant to my job" (02-00-35).
"It addresses a need previously unaddressed" (04-01-08).

[3] The number in parentheses refers to the code number assigned to subjects who completed the Feedforward form.

Table 2

Session "Feedforward" Instrument: Subject Responses to Questions 7 to 10

	Item	n	Percentage
7.	How *stimulating* did you find this session?		
	Highly stimulating	83	34
	Substantially stimulating	118	49
	Somewhat stimulating	35	14
	Slightly stimulating (or less)	7	3
8.	How *relevant* to your job situation did you find the contents of this session?		
	Extremely relevant	116	48
	Substantially relevant	87	36
	Somewhat relevant	31	13
	Slightly relevant (or less)	6	3
9.	How *useful* (practical) for you was the information gained in this session?		
	Extremely useful	100	42
	Substantially useful	102	43
	Somewhat useful	30	13
	Slightly useful (or less)	5	2
10.	How well *motivated* are you to try to advocate for a potentially gifted student from an economically disadvantaged background?		
	I am definitely going to implement this plan.	184	79
	I am considering implementing, may try.	46	20
	I am considering implementing, have doubts.	3	2
	I am skeptical. I may. I may not.	0	0

The 12 comments made regarding teacher involvement reflected their appreciation for being actively included in the process of identification of gifted students. Examples of the comments were as follows:

"Our opinions matter" (02-00-12).
"It recognizes the fact that teachers are good at observing unique, special traits in kids" (06-01-68).
"It may help us to discover and serve a child whose life may be significantly changed because of this discovery of his potential" (04-02-13).

Meetings were held with site representatives to gather formative and summative information on the implementation of the SDM in their school system. Site representatives reported that many of their teachers probably "over nominated" students for the project because of their keen desire to "do right" by students who, as a group, have so often been neglected by our educational system. Teachers did not expect that all the students referred would be selected for program placement. Site representatives also reported that teachers generally expressed an aversion to any use of quotas, but did express strong desires to err on the side of inclusion if there were any signs of exceptional potential. Other information reported by the site representatives includes observations and comments such as the following:

From teachers:

a. Somehow the project brought recommending students to their mind more. Teachers are pursuing us, whereas before we always pursued them for recommendations.
b. Classroom teachers from nonpilot sites want to refer students who fit the model. Teachers have ownership. They care more and are more supportive of the program.
c. Teachers have long been aware that the disadvantaged population, unfortunately, has not met criteria. They are thrilled that they are getting an opportunity now and are these kids best advocates.

From administrators:

a. My supervisor is really pleased with the new assessment. She has always felt that we were missing children because of distracting and/or complicating behaviors and characteristics, but did not know exactly how to address this problem. She is anxious to have whole staff training. She was a little concerned about cost of all new assessment tools. The principal is apprehensive being from the "old school." He still sees "gifted" as academically/IQ based only. Educate, educate, educate!
b. Everyone is delighted with our participation in the project. Without exception, teachers and administrators would like to see this identification process used system wide. Everyone I have talked to considers it a superior method.

From the community:

a. There is a great deal of support from all areas of the community. I only know of one response that was negative. We had one call in which the caller was afraid that this method would "water down" the program.
b. Two parents have asked that their child be reassessed using the new criteria because they see their child as gifted although by our old assessment they did not place. One of these students just barely did not place. The Child Study Team at that time did not feel empowered to place the child based on subjective measures. I am anxious, but also a little apprehensive, to reassess them.
c. The parents in our chapter of Georgia Supporters of the Gifted have been delighted with this project because they are intelligent enough to know that what we are doing is important. It has not been a project that impacted their children, but they were pleased to see it doing something for others.

From students (as reported by teachers):

a. My students in grades 4-6 are aware of the assessment project and have questioned what we are doing and why. They are very much in favor of this. I have used the areas on the *Panning for Gold* sheet to talk to my students about the individuality and uniqueness of them and their peers whether in or not in our program. I see an increased awareness in them of each other and of themselves. I think they were able to see the range of giftedness much easier than adults! One of my sixth graders has now referred a student in his class that he feels we should consider even if (his) teacher doesn't see that she is gifted.
b. Students have referred themselves.

There were concerns raised about reverse discrimination and the effects that identified target populations students would have on the quality of programs offered. Comments such as the following were reported:

> What services will be available for these students once they have been identified?
> How will program services differ to meet their diverse needs?
> Won't this water-down the gifted program?

Number of Students Referred

It was anticipated that approximately 10 to 15 students per site would be referred. However approximately 4 times as many or 341 target population students were recommended for assessment. It was discovered, however, that 14 of these students qualified for gifted program participation according to the traditional criteria used in the state of Georgia. Thus, 327 students were finally referred for assessment (see Table 3). Of these 327 referred students, 60% percent were African Americans; 9%, Native Americans; 16%, White; and 16%, "Others." The majority of the students referred were elementary (74%). Almost half the referred students were male (47%); a little more than half were female (53%).

Results for Research Question 2

Research question 2 asked: Does the RAP provide an effective process to facilitate the use of multiple criteria in making better professional decisions about the identification and education of target population students? Evidence to address this question was derived from formative and summative feedback on the implementation of the RAP and the performance differences between selected and nonselected students.

A total of 121 students were selected from the 327 students referred for assessment. Of the selected, 55% students were African Americans; 4%, Native Americans; 22%, White; and 18%, "Other" (see Table 4). Again, the majority of the students selected were elementary (82%). More female students (59%) than males (41%) were selected.

Students were grouped by program placement status which has two levels: selected and nonselected. Selected means that students were favorably recommended for gifted program participation. Nonselected means that students were not recommended for program participation. In this study, comparisons of performances on standardized measures were only made between selected and nonselected students using an analysis of variance.

Table 3

Distribution of Students Referred for Testing by Ethnicity, Grade, and Gender (N = 327)

	African-American	Native-American	White	Other	Total
Elementary	152	11	42	29	234 (74)
K	18	1	3	9	31
First	24	0	7	5	36
Second	25	0	16	1	42
Third	40	6	7	6	59
Fourth	25	3	6	7	41
Fifth	20	1	3	1	25
Secondary	44	17	9	23	93 (26)
Sixth	24	0	3	9	36
Seventh	10	8	6	8	32
Eighth	10	4	0	6	20
Ninth	0	1	0	0	1
Tenth	0	4	0	0	4
Male	94	16	25	19	154 (47)
Female	102	12	26	33	173 (53)
Total	196 (60)	28 (9)	51 (16)	52 (16)	327

Note. Numbers in parentheses represent the percentage of students in the categories.

Table 4

Distribution of Students Selected for Placement in Gifted Program by Ethnicity, Grade, and Gender (N = 121)

	African-American	Native-American	White	Other	Total
Elementary	55	2	25	17	99 (82)
K	6	0	1	4	11
First	10	0	6	2	18
Second	10	0	10	1	21
Third	6	0	3	5	14
Fourth	14	1	2	5	22
Fifth	9	1	3	0	13
Secondary	12	3	2	5	22 (18)
Sixth	7	0	0	1	8
Seventh	3	1	2	2	8
Eighth	2	0	0	2	4
Ninth	0	0	0	0	0
Tenth	0	2	0	0	2
Male	28	1	12	8	49 (41)
Female	39	4	15	14	72 (59)
Total	67 (55)	5 (4)	27 (22)	22 (18)	121

Note. Numbers in parentheses represent the percentage of students in the categories.

Developing Cognitive Ability Test (DCAT) Performance

Significant mean differences were found for program placement status. That is, selected students scored significantly higher than nonselected students on each subtest score at the .003 level (Familywise Type I error rate = .05/11) and on the total score of the *DCAT* at the .001 level (see Table 5).

Bloom's Taxonomy Findings

Significant differences were found between selected and nonselected students for all the Bloom's Taxonomy levels except the Knowledge level, at the .01 level (Familywise Type I error rate = .05/5). That is, students who were selected for placement scored significantly higher than those who were not selected, on all the Bloom's Taxonomy levels except the Knowledge level (see Table 6).

School Attitude Measure (SAM) Performance

No significant differences were found for program placement status on any of the five *SAM* subtests (Motivation for Schooling, Academic Self-Concept/Performance Based, Academic Self-Concept/Reference Based, Control Over Performance, and Instructional Mastery). There was also no significant difference found for program placement status on the total score.

Table 5

Analysis of Variance for the Subtests and the Total Score of the *Developing Cognitive Abilities Test* by Program Placement Status

	Mean	SD	F[a]	p
Verbal			10.863	.0011*
Nonselected[b]	54.60	17.97		
Selected[c]	70.40	20.41		
Quantitative			27.969	.0000*
Nonselected[b]	53.30	17.12		
Selected[c]	71.16	16.51		
Spatial			11.253	.0009*
Nonselected[b]	47.68	18.86		
Selected[c]	64.14	21.18		
Total			42.165	.0000**
Nonselected[b]	49.73	14.31		
Selected[c]	68.97	13.55		

Note. [a] df = 1, 260. [b] n = 180. [c] n = 110.
*p < .003 (Familywise Type I error rate = .05/11).
**p < .001.

Table 6

Analysis of Variance for the Bloom's Taxonomy Scores of the *Developing Cognitive Abilities Test* by Program Placement Status

	Mean	SD	F	p
Knowledge			6.722[a]	.0101*
Nonselected[b]	78.52	18.53		
Selected[c]	85.79	14.19		
Comprehension			7.623[a]	.0062*
Nonselected[b]	68.51	17.99		
Selected[c]	80.56	13.30		
Application			30.095[a]	.0000*
Nonselected[b]	61.72	15.86		
Selected[c]	76.35	12.07		
Analysis			22.431[a]	.0000*
Nonselected[b]	48.18	18.43		
Selected[c]	67.26	18.97		
Synthesis			29.430[d]	.0000*
Nonselected[e]	43.86	16.77		
Selected[f]	61.23	16.44		

Note. [a] df = 1, 260. [b] n = 180. [c] n = 110. [d] df = 1, 256. [e] n = 177. [f] n = 109.
*p < .01 (Familywise Type I error rate = .05/5).

***Torrance Tests of Creative Thinking (TTCT)*, Figural, Form B Performance**

A significant difference was found between selected and nonselected student only for the Abstractness of Titles score at the .01 level (Familywise Type I error rate = .05/5). That is, those students who were selected for placement in gifted programs scored significantly higher than those who were not selected on Abstractness of Titles (see Table 7).

***Scales for Rating Behavioral Characteristics of Superior Students (SRBCSS)* Performance**

A significant differences was found between selected and nonselected students on the *SRBCSS* Learning subtest at the .0125 level (Familywise Type I error rate = .05/4). That is, selected students were observed by their teachers to demonstrate learning characteristics of gifted individuals at a significantly higher level than nonselected students (see Table 8).

Table 7

Analysis of Variance for the Abstractness of Titles Score of the *Torrance Tests of Creative Thinking* by Program Placement Status

	n	Mean	SD	F[a]	p
Nonselected	168	95.92	32.25	6.962	.0089*
Selected	81	105.47	29.38		

Note. [a] df = 1, 221.
*p < .01 (Familywise Type I error rate = .05/5).

Table 8

Analysis of Variance on the Subscales of the *Scales for Rating Behavioral Characteristics* by Program Placement Status

	Mean	SD	F[a]	p
Learning			10.64	.0012*
Nonselected[b]	72.20	15.20		
Selected[c]	80.80	13.40		
Motivation			5.16	.0238
Nonselected[b]	69.90	14.20		
Selected[c]	74.50	12.60		
Creativity			5.51	.0195
Nonselected[b]	67.20	15.60		
Selected[c]	71.70	15.70		
Leadership			4.93	.0272
Nonselected[b]	77.50	15.00		
Selected[c]	83.50	13.70		

Note. [a] df = 1, 293. [b] n = 190. [c] n = 119.
*p < .0125 (Familywise Type I error rate = .05/4).

Children's Language Usage Evaluation Scale (CLUES)

CLUES was developed by researchers at The University of Georgia to evaluate children's use of language as evidenced in a writing sample. Students generated a writing sample on a topic of their choice. Points were given each time an element in the following five categories was present in the writing sample:

1. Fluency of writing: Number of ideas (length), flow of ideas.
2. Language Usage: Verbs, adjectives, precision, picturesque speech.
3. Story Structure: Unusual beginning, unusual dialogue, unusual ending, unusual plot, inclusion of readers.
4. Novelty: Novelty of names, novelty of locale, unique punctuation and expressional devices, novel devices, ingenuity in solving situations, combination of ideas in unusual relationships, humor.
5. Personal Interpretation: Unusual ability to express emotional depth, unusual ability to identify self with others, unusual sensitivity, unique philosophical thinking.

The writing samples were also analyzed for the presence of novelty features such as (a) novelty of ideas, (b) novelty of themes, (c) novelty of form, (d) facility in beautiful writing, and (e) vivid presentation of personal experiences. Additional points were added to the score if these features were present.

Writing samples were available for 196 students (72 of the students selected for program participation and 124 of the students not selected for program participation). Results of the evaluations of stories submitted are summarized by categories.

1. Fluency of Writing: Sixty-eight (94%) of the selected students received one or more points for fluency; 119 (96%) of the nonselected students scored one or more points for fluency.
2. Language Usage: Fifty-seven (79%) of the selected students and 86 (69%) of the nonselected student exhibited two or more of the language usage elements in their stories.
3. Story Structure: Forty-six (64%) of the selected and 58 (47%) of the nonselected students exhibited three or more of the story structure elements in their story's plot, inclusion of readers, vitality.
4. Novelty: Forty-two (58%) of the selected students and 48 (39%) of the nonselected students received points for three or more novelty elements in their stories.
5. Personal Interpretation: Thirty-eight (53%) of the selected students and 50 (40%) of the nonselected students included two or more emotional expressive elements in their stories.
6. Optional Features: Twenty-seven (38%) of the stories of selected students and 21 (17%) of the stories of the nonselected students included optional features.

Overall, selected students exhibited a more unusual writing or storytelling ability than nonselected students. Ten percent more of the selected students had two or more elements in the language usage category in their stories than did nonselected students. More of the selected students than the nonselected students had a greater number of elements in their stories in each of the other categories. In fact, in the optional features categories more than 50% of the selected students exhibited included at least two or more

optional elements in their stories than did nonselected students. The only category in which nonselected students exceeded the performance of selected students was in fluency.[4]

Discussion

Summary

The purpose of this study was to explore the potential of the SDM and the RAP as effective procedures to improve the identification and education of gifted students from economically disadvantaged families and areas, some of whom may have limited proficiency in the English language. The target group for this study was children who were eligible for free or reduced lunch, regardless of ethnic or cultural group membership.

Information to determine the effectiveness of these models was derived from feedback provided by the instructional staff at the schools that participated in the study, from the representatives who coordinated activities at the school sites, and from comparing the performance of selected vs. nonselected students. The school sites were located in Georgia and North Carolina. Because of the location of the research sites, students involved in the study were primarily African-American, Native American, and White. Children who were not members of one of these groups were classified as "Other."

Two research questions were posed: (a) Does the Staff Development Model (SDM) provide an effective process to train teachers to better observe and refer target population students for gifted program participation? and (b) Does the Research-Based Assessment Plan (RAP) provide an effective process to facilitate the use of multiple selection criteria in making better professional decisions about the identification and education of gifted target population students? The first question was designed to explore whether teachers who are trained, using the SDM process, can confidently refer students from the target population for gifted program participation who normally would not have been referred. The second question was designed to explore whether the RAP effectively facilitates teachers' ability to confidently use multiple criteria (or data from objective and subjective sources) to make recommendations for placement of target population students in gifted programs.

Overall, participants in this study appeared to have confidence in their ability to refer students from the target population who normally would not have been referred for gifted program placement as indicated by the high number of students referred (341) and the positive reactions to the training received using the SDM. Participants also appeared to show confidence in their ability to use multiple criteria or data from multiple sources to make professional recommendations for gifted program placement using the RAP. Participants appeared to feel empowered to take an active role in advocating for target population students. For example, their comments reflected overall gratification with having their observations and recommendations valued and with having a procedure that allowed them to use other information besides a test score to make program placement decisions.

Implications

Finding an effective way to identify gifted target population students is not easy. Numerous issues intertwine to defy simple solutions to this complex problem that has challenged educators for over 30 years. The purpose of this study was to explore the

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[4] Contact the first author for complete information on evaluating writing samples using the *CLUES*.

potential of a staff development model and an assessment model to comprehensively address all of the issues that affect the resolution of the seemingly intractable problems in recognizing the gifted potential of students from economically disadvantaged backgrounds including those of limited English proficiency. The issues include (a) adequate preparation of teachers to observe the abilities of target students from a proficiency perspective, and (b) facilitation of the collection and use of information derived from multiple sources, objective and subjective, when making professional decisions for placement and services. These issues cannot be addressed without considering barriers created by traditional ways of defining giftedness; current rules and regulations governing the participation of students in gifted programs; negative perceptions about students from economically disadvantaged backgrounds; the lack of confidence in the ability of low income families to nurture the intellectual development of their children; and identification procedures that rely on standardized tests.

Each of these issues was considered in this exploratory study. This action-oriented study took place in six diverse school settings where a number of challenges had to be considered, e.g., scheduling problems, competition with other school-based initiatives, transient students and their families, different administrative styles. Implications from this study are presented in this section and relate to (a) definition, (b) educator roles, (c) decision-making, and (d) program and curricular adaptation.

The Concept of Giftedness as a Psychological Construct

A basic implication of this study is that considering giftedness as a construct defined by a set of core attributes provides a feasible way to introduce the TABs associated with giftedness to a school's instructional staff. Given the logic of viewing gifted ability as multidimensional, the TABs appeared to provide a promising way to introduce school staff to the discovery of potential in children, regardless of economic status, cultural/ethnic group membership, and language proficiency. The participants in this study were quick to recognize the validity of the TABs as markers of gifted potential when they were presented in the form of vignettes that were closely connected to traditional classroom activities. This understanding was evident in the rapidity with which participants could generate their own vignettes with great confidence in the validity of their observations.

The Role of the Classroom Teachers and Other School Staff

A finding of this exploratory study was the affirmation of the importance of the full involvement of teachers and other school staff in the process of identifying gifted target population students. Since target population students have rarely been selected for gifted program participation, regular educators were the most logical persons to know them best. These educators need to be empowered to be involved in the entire process of referral, identification, and programming. This is the only way that they can become effective advocates for gifted target population students, a task to which they are fully capable given appropriate training. Feedback from the participants attests to the value of having teachers involved in the entire observation and identification process. The enthusiasm demonstrated by many of the participants provides some evidence of their potential to become more effective at recognizing gifted potential in target population students, given appropriate training.

The Relation Between Professional Decision Making and the Use of Multiple Criteria

A key objective of the RAP was to replace the emphasis on tests as the primary identifier of gifted potential with an emphasis on effectively using relevant information

collected from multiple sources. A willingness to value information from subjective as well as objective sources was critical. It was important that participants saw a need for both types of information to develop a comprehensive picture of students' ability, and that they did not feel that either type of information was a substitute for the other.

In addition, an important component of the RAP was the use of a group-oriented decision making process for placement that depended on studying and interpreting the information derived from the multiple measures used in constructing the profile. The decision for placement was not based on any one measure; rather the decision was based on the interaction of and the complementary nature of information derived from several sources. The process used was consistent with the basic tenets of expert decision-making theory wherein the interrelationships of information are systematically considered (Wright & Bolger, 1992). Group interactions were relied on to increase judgmental accuracy and confidence (Sniezek & Henry, 1990). Planned follow-up study on the performance of selected students will provide further evaluation of the reliability of placement decisions.

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Appendix A

Sample Vignettes

Sample Vignettes

Vignette 1

"This child came to my attention because first grade teachers were asked to refer superior students for placement in the gifted program. The teachers were asked to rate each child referred on specific characteristics of gifted children. This child's teacher gave him the highest scores on the following characteristics: learns rapidly and retains what he has learned, uses a rich vocabulary accurately, shows marked degree of curiosity, reasons well, recognizes relationship—comprehends abstract ideas, works independently, shows characteristics of leadership and shows concern for the interests and welfare of others. On the *Cognitive Ability Test* given in May 1991, he scored 87% on the verbal battery, 98% on the nonverbal battery, and 17% on the quantitative battery."

Vignette 2

"This boy's record showed him to be below grade level when he entered kindergarten. His language skills were low enough to qualify him for speech/language help. He has missed several days of school and has been tardy on many days. Still, he continues to make excellent progress in language arts, math, science, and social studies in second grade.

His other teachers said, "Yes!" They also believe this child has unusual learning ability. His speech teacher feels he came to kindergarten with few language skills, but has bridged the gap now that he has learned to read! He has read over seventy books this year in addition to the second and third grade Houghton-Mifflin basals."

Vignette 3

"The first thing about Van that caught and held my attention is his disruptive behavior. The behavior has been compounded by the strong leadership ability Van demonstrates with his peers. Looking beyond that, I see a bright inquisitive mind. Van wants to answer every question asked and his answers are usually correct. Despite his behavior, every assignment is finished quickly and neatly. Finishing his school work has always been Van's highest priority. Van demonstrates a good backlog of information on many subjects. Information that he has had to acquire in his own way. I equate Van's mental growth and development with children who come from homes in which English is not the primary language spoken. Van is a bright, inquisitive child who deserves help in developing his potential."

Vignette 4

"This student was referred to me by his regular classroom teacher. As I talked with him during the testing, I was impressed with his vocabulary range and with the articulate manner in which he expressed his ideas and thoughts. His classroom teacher offered the following observations:

- He remembers word-for-word what he has read in social studies.
- He knows the meaning of every word I've asked.
- He has a building vocabulary—he can figure out a meaning from taking the word apart, etc.
- He and his parents read a lot at home.

- At parent conference time I was amazed at the vocabulary of his father and the father's articulation.
- He and his parents read a lot at home.
- He is an only child.
- He lacks self-motivation."

Vignette 5

"She is a very bright, well motivated student who has never qualified for formal placement based on her standardized test scores (*CTBS* and *TCS*). Her teacher recommended her to the resource teacher to help find her weaknesses.

Although she is excellent at using higher level thinking skills to solve problems, she spends so long at an assignment—perfection, to a fault—that she never sees it through to completion. This could definitely have some effect on her test performance. If she could be identified in a formal program based on multiple criteria, in my opinion, she would most likely be accepted."

Appendix B

Panning for Gold

Panning for Gold

Student Referral Form

Name of Student: _____ Gender: M F

School: _____ Grade: _____ Birth date:

Name of Person Referring:

Relation to Student:

Racial/Ethnic Identification (please be as specific as possible: e.g., Lebanese, African-American, Cuban-American, etc.)

Length of residency in the U.S.:

Primary language spoken at home:

Language proficiency scores, if available: First language _____ English

Directions: Please rate the student being referred for assessment on each TAB. Also provide specific example(s) or comment(s) for each of the TABs. The **Panning for Gold** TABs Observation Sheet may assist you in completing this form.

Communication

- unusual ability to communicate (verbally, nonverbally, physically, artistically, symbolically)
- uses particularly apt examples, illustrations, or elaborations

In this area, the student is: _____	Strong 5	4	Average 3	2	Weak 1

Specific example(s)

Motivation

- persistent in pursuing/completing self-selected tasks (may be culturally influenced); evident in school or non-school type activities
- enthusiastic learner
- has aspirations to be somebody, do something

In this area, the student is: _____	Strong 5	4	Average 3	2	Weak 1

Specific example(s)

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Humor

- keen sense of humor that may be gentle or hostile
- large accumulation about emotions
- heightened capacity for seeing unusual relationships
- unusual emotional depth
- openness to experiences
- heightened sensory awareness

In this area, the student is: _____

Strong 5 4 Average 3 2 Weak 1

Specific example(s)

Inquiry

- asks unusual questions for age
- plays around with ideas
- extensive exploratory behaviors directed toward eliciting information about materials, devices or situations

In this area, the student is: _____

Strong 5 4 Average 3 2 Weak 1

Specific example(s)

Insight

- has exceptional ability to draw inferences
- appears to be a good guesser
- is keenly observant
- integrates ideas and disciplines

In this area, the student is: _____

Strong 5 4 Average 3 2 Weak 1

Specific example(s)

Interests

- unusual or advanced interests in a topic or activity
- self-starter
- pursues an activity unceasingly
- beyond the group

In this area, the student is: _____	Strong 5	4	Average 3	2	Weak 1

Specific example(s)

Problem Solving Ability

- unusual ability to devise or adapt a systematic strategy for solving problems and to change the strategy if it is not working
- creates new designs
- inventor/innovator

In this area, the student is: _____	Strong 5	4	Average 3	2	Weak 1

Specific example(s)

Memory

- already knows
- 1-2 repetitions for mastery
- has a wealth of information about school or non-school topics
- pays attention to details
- manipulates information

In this area, the student is: _____	Strong 5	4	Average 3	2	Weak 1

Specific example(s)

Reasoning

- ability to make generalizations
- ability to use metaphors and analogies
- can think things through in a logical manner
- critical thinker
- ability to think things through and come up with a plausible answer

In this area, the student is:	Strong		Average		Weak
_____	5	4	3	2	1

Specific example(s)

Imagination/Creativity

- shows exceptional ingenuity in using everyday materials
- is keenly observant
- has wild, seemingly silly ideas
- fluent and flexible producer of ideas
- is highly curious

In this area, the student is:	Strong		Average		Weak
_____	5	4	3	2	1

Specific example(s)

Any other significant observations of abilities:

Format adapted from: Portland Public Schools, Portland, Oregon
The National Research Center on the Gifted and Talented
The University of Georgia
Revised 7/92

Selection of Student Pool for the RAP

GROUP I	GROUP II
I think this child shows real strength, but, in my best judgment, he/she is **not a member of one of the target populations**—economically disadvantaged or of limited English proficiency.	This child is a member of one of the target groups, and I feel **very strongly** that he/she is potentially gifted.
GROUP III	**GROUP IV**
This child is a member of one of the target groups, and I've seen some indicators of high potential, but I'm just **not sure** if gifted placement would be in his/her best interest.	This child is a member of one of the target groups, and he/she occasionally shows some real "sparks" of potential, but overall he/she is **probably not a good candidate** for referral.

Panning for Gold Observation Sheet

Circle One: Class Student

Name:_____

Directions: Use the boxes below the definitions and descriptions of the basic **traits, aptitudes, and behaviors (TABs)** associated with the giftedness construct to record examples of **TABs** displayed by the student(s). Use the scale in the box to summarize your evaluation.

Motivation Evidence of desire to learn. **Description:** Forces that initiate, direct and sustain individual or group behavior in order to satisfy a need or attain a goal. **Student may:** - demonstrate persistence in pursuing/completing self-selected tasks (may be culturally influenced; evident in school or non-school activities). - be an enthusiastic learner. - aspire to be somebody, do something.	**Interests** Intense (sometimes unusual) interests. **Description:** Activities, avocations, objects, etc., that have special worth or significance and are given special attention. **Student may:** - demonstrate unusual or advanced interests in a topic or activity. - be a self-starter. - be beyond age-group. - pursue an activity unceasingly.	**Communication Skills** Highly expressive and effective use of words, numbers, symbols. **Description:** Transmission and reception of signals or meanings through a system of symbols (codes, gestures, language, numbers). **Student may:** - demonstrate unusual ability to communicate (verbally, physically, artistically, symbolically). - use particularly apt examples, illustrations or elaborations.	**Problem-Solving Ability** Effective, often inventive, strategies for recognizing and solving problems. **Description:** Process of determining a correct sequence of alternatives leading to a desired goal or to successful completion or performance of a task. **Student may:** - demonstrate unusual ability to devise or adapt a systematic strategy for solving problems and to change the strategy if it is not working. - create new designs, invent.	**Memory** Large storehouse of information on school or non-school topics. **Description:** Exceptional ability to retain and retrieve information. **Student may:** - already know. - need only 1-2 repetitions for mastery. - have a wealth of information about school or non-school topics. - pay attention to details. - manipulate information.
Motivation Evidence of desire to learn. 10 8 6 4 2 Strong Moderate Weak	**Interests** Intense (sometimes unusual) interests. 10 8 6 4 2 Strong Moderate Weak	**Communication Skills** Highly expressive and effective use of words, numbers, symbols. 10 8 6 4 2 Strong Moderate Weak	**Problem-Solving Ability** Effective, often inventive, strategies for recognizing and solving problems. 10 8 6 4 2 Strong Moderate Weak	**Memory** Large storehouse of information on school or non-school topics. 10 8 6 4 2 Strong Moderate Weak

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Panning for Gold Observation Sheet (continued)

Inquiry	Insight	Reasoning	Imagination/Creativity	Humor
Questions, experiments, explores. **Description:** Method or process of seeking knowledge, understanding or information. **Student may:** - ask unusual questions for age. - play around with ideas. - demonstrate extensive exploratory behaviors directed toward eliciting information about materials, devices or situations.	Quickly grasps new concepts and makes connections; senses deeper meanings. **Description:** Sudden discovery of the correct solution following incorrect attempts based primarily on trial and error. **Student may:** - demonstrate exceptional ability to draw inferences. - appear to be a good guesser. - be keenly observant. - possess heightened capacity for seeing unusual and diverse relationships. - integrate ideas and disciplines.	Logical approaches to figuring out solutions. **Description:** Highly conscious, directed, controlled, active, intentional, forward-looking, goal oriented thought. **Student may:** - make generalizations. - use metaphors and analogies. - think things through in a logical manner. - think critically. - think things through and come up with a plausible answer.	Produces many ideas; highly original. **Description:** Process of forming mental images of objects, qualities, situations or relationships which aren't immediately apparent to the senses. Problem-solving through non-traditional patterns of thinking. **Student may:** - show exceptional ingenuity in using everyday materials. - have wild, seemingly silly ideas. - produce ideas fluently/flexibly. - be highly curious.	Conveys and picks up on humor. **Description:** Ability to synthesize key ideas or problems in complex situations in a humorous way; exceptional sense of timing in words and gestures. **Student may:** - have keen sense of humor-may be gentle or hostile. - have large accumulation of information about emotions. - see unusual relationships. - demonstrate unusual emotional depth. - be open to experiences. - demonstrate sensory awareness.
Inquiry Questions, experiments, explores. 10 8 6 4 2 Strong Moderate Weak	**Insight** Quickly grasps new concepts and makes connections; senses deeper meanings. 10 8 6 4 2 Strong Moderate Weak	**Reasoning** Logical approaches to figuring out solutions. 10 8 6 4 2 Strong Moderate Weak	**Imagination/Creativity** Produces many ideas; highly original. 10 8 6 4 2 Strong Moderate Weak	**Humor** Conveys and picks up on humor. Format Adapted from Sandra Kaplan's "Jot Sheet" **RESEARCH EDITION** NRC G/T at UGA June 1992 10 8 6 4 2 Strong Moderate Weak

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Appendix C

Frasier Talent Assessment Profile (F-TAP)

Frasier Talent Assessment Profile™

Student Information

Name_____Student Code_____

D.O.B._____Gender___Race/Ethnicity____

Grade_____ School Name/Number_____

Parent/Guardian_____

Referred By:_____

Relationship to Student_____

Committee Decisions

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Student Code _____ **Assessment**

Process/Performance

Data Categories	Test/Rating Scale/Rater Observer/Product/ Performance/ Descriptor/etcetera	Percentile	1	2	16	50	84	98	99.9
		Stanine	1	2	3	4 5	6	7 8	9
		Deviational IQ	52	68	84	100	116	132	148
		Standard Deviation	-3	-2	-1	0	+1	+2	+3

Student Code _____ **Assessment**

Advocacy Information

Language Proficiency

Self-Perception of Ability

Additional Information Aptitude/ Achievement

Other

Referral

TABs Summary

_____Motivation

_____Interests

_____Communication Skills

_____Problem-Solving Ability

_____Memory

_____Inquiry

_____Insight

_____Reasoning

_____Imagination/Creativity

_____Humor

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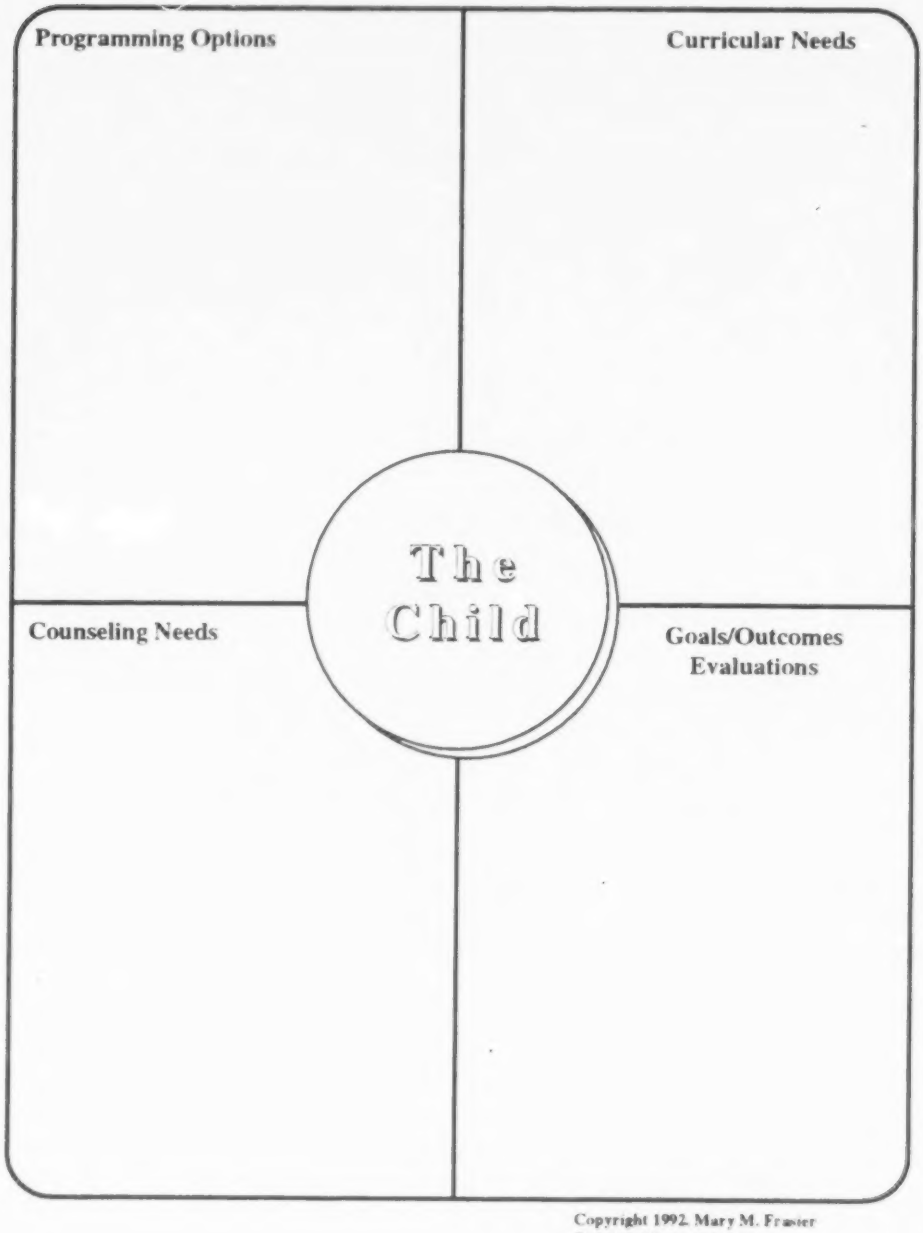
Student Code _____ **Educational Plan**



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Appendix D

Session "Feedforward" Instrument

Session Topic: Identifying Giftedness in Economically Disadvantaged and Limited English Proficient Students

Please complete each of the items on this form. The information will be used to help us modify future presentations.

Date _____
Number of years teaching experience _____
Certification level _____
Position/Teaching Assignment (e.g., 5th grade, regular classroom; art teacher, K-5)

Your age group? (circle one) 20-30 31-40 41-50 51+

	Strongly Disagree				Strongly Agree
1. Objectives of the session were clearly stated.	1	2	3	4	5
2. Terms used were clearly defined.	1	2	3	4	5
3. Handouts provided useful information.	1	2	3	4	5
4. Overheads provided useful information.	1	2	3	4	5
5. The presenter(s) were effective.	1	2	3	4	5
6. Directions for using materials were adequate.	1	2	3	4	5

7. How stimulating did you find this session? (check only one)
   ( ) Highly stimulating
   ( ) Substantially stimulating
   ( ) Somewhat stimulating
   ( ) Slightly stimulating (or less)

8. How relevant to your job situation did you find the contents of the session?
   ( ) Extremely relevant
   ( ) Substantially relevant
   ( ) Somewhat relevant
   ( ) Slightly relevant (or less)

9. How useful (practical) for you was the information gained in this session?
   ( ) Extremely useful
   ( ) Substantially useful
   ( ) Somewhat useful
   ( ) Slightly useful (or less)

10. How well motivated are you to try to advocate for a potentially gifted student from an economically disadvantaged background? (check one that fits best)
   ( ) I am definitely going to implement this plan.
   ( ) I am considering implementing, may try.
   ( ) I am considering implementing, have doubts.
   ( ) I am skeptical. I may. I may not.

11. Three strong points of this presentation were:

    1.

    2.

    3.

12. How could this presentation have been more effective?

    1.

    2.

    3.

Appendix E

Why Do We Identify So Few Gifted Children From Economically Disadvantaged (ED) and Limited English Proficient (LEP) Backgrounds?

Position _____ **Grade** _____ **Subject/Content** _____

Based on your experiences as an educator, please help us to understand why so few children from economically disadvantaged backgrounds are identified as gifted? Use the following scale to indicate your perceptions about some possible barriers to the identification of gifted students who are poor:

Strongly Agree		**Uncertain**		**Strongly Disagree**
1	**2**	**3**	**4**	**5**

Place the number which best matches your perception in the blank at the beginning of each statement.

_____ 1. Deficits in language experiences hinder the development of giftedness in children from deprived backgrounds.

_____ 2. Parents of poor children often do not provide them with stimulating early home environments; thus, these children often enter school at a disadvantage and are unlikely to catch up.

_____ 3. Teachers often do not recognize indicators of potential giftedness in economically disadvantaged or limited English proficient children.

_____ 4. Standardized tests are biased against minority and economically disadvantaged students, so they can't score high enough to qualify for gifted programs.

_____ 5. Because of prejudice (either subconscious or overt), teachers often do not nominate poor or culturally different children for gifted screening.

_____ 6. There are few truly gifted children who come from economically disadvantaged backgrounds.

_____ 7. The screening/selection process used by my school/state is too narrow to permit poor or minority students to qualify for gifted placement.

_____ 8. Intellectual giftedness is not valued by some cultural groups, so parents of children from those groups do not encourage their children to excel in school.

_____ 9. Teachers fear that placing economically disadvantaged and limited English proficient students in existing gifted programs will "water down" the quality of those programs.

____ 10. Nonstandard English and limited English proficiency prevent children from performing well enough in school to be nominated for gifted programs.

Appendix F

Children's Language Usage Evaluation Scale (CLUES)

CHILDREN'S LANGUAGE USAGE EVALUATION SCALE

ELEMENT	ITEM	DESCRIPTORS	SCORING PROCEDURE
FLUENCY OF WRITING	1. Number of Ideas (Length)	(Dictated/Child Written # Categories by grade levels)	Score items either 0 or 1: 0 = item not present
	2. Flow of Ideas	Words flow smoothly or easily.	1 = item present
LANGUAGE USAGE	3. Verbs	Descriptive verbs uncommon for age group	Record really terrific instances of an item in the Comment section of the score sheet. * Optional Features are not scored, but presence of these items are recorded under the space provided on the scoring sheet.
	4. Adjectives	Descriptive adjectives uncommon for age group	
	5. Precision	Correct words used to describe or name people, objects, and events that are uncommon for age group.	
	6. Picturesque Speech	Especially effective words, phrases, slang, figures of speech, comparisons, or the creation of new words that are appealing to senses and create images in the reader's mind.	Total Items = 24 Fluency of Writing - 2 Language Used - 4 Story Structure - 6 Novelty - 7 Personal Interpretation - 5
STORY STRUCTURE	7. Unusual Beginning	Lead-in appearing with statistical infrequency in stories written by children at this grade level.	
	8. Unusual Dialog	Dialogue is used naturally and does not seem to be forced or artificial.	
	9. Unusual Ending	Different, unexpected, or rare conclusion. Elements of surprise are used effectively.	
	10. Unusual Plot	Plot develops in mature logical fashion giving relevant accounts of events. Tale unfolds before the reader's eyes.	
	11. Inclusion of Readers	Child speaks to or develops idea(s) with reader.	
	12. Vitality	There is much color and life portrayed. Reader may want to read again or share writing with others.	
NOVELTY	13. Novelty of Names	Names for characters are unusual or rare.	
	14. Novelty of Locale	Unusual setting chosen for story.	
	15. Unique Punctuation & Expressional Devices	Novel or unusual punctuation, symbols, variety of handwriting, or other devices represent feeling or emotion.	
	16. Novel Devices	Novel contrivances, devices, or natural phenomena are used to describe people, objects, or events in the story.	

ELEMENT	ITEM	DESCRIPTORS	SCORING PROCEDURE
NOVELTY (cont'd)	17. Ingenuity in Solving Situations	Unique methods used to develop or describe resolution of situation(s) in the story.	
	18. Combination of Ideas in Unusual Relationships	Synthesis of ideas present or describe an unusual relationship.	
	19. Humor	Elements are brought together in a humorous fashion infrequently seen at this age level.	
PERSONAL INTERPRETATION	20. Unusual Ability to Express Emotional Depth	Emotional elements used enhance meaning of the story. Effective development or descriptions of characters' feelings are demonstrated.	
	21. Unusual Sincerity in Expressing Personal Problems	Real feelings expressed; reader has the sense that author is identifying self with problem or situation.	
	22. Unusual Ability to Identify Self with Others	Ability to show empathy in describing people, objects, or events.	
	23. Unusual Sensitivity	Perceptive to social and physical environment.	
	24. Unique Philosophical Thinking	Philosophical thinking is at a deep level for this age group.	

OPTIONAL FEATURES	* Novelty of Ideas	Idea(s) seem to be rare. Idea(s) unusual for age level.	* Record presence of these items by listing specifics under Optional Features on the scoring sheet.
	* Novelty of Theme	Theme of entire story that appears rarely at this grade level. Demonstrates comprehension of mature topics.	
	* Novelty of Form	In response to write a short story, child creates verse, dramatic form or different type of writing.	
	* Facility in Beautiful Writing	Individual facility in utilizing words or expressions in a beautiful manner is rare at this age level.	
	* Vivid Presentation of Personal Experience	Personal-realistic experiences are presented in a sincere, vivid manner.	

Adapted From: Carlson Analytical Scale for Measuring the Originality of Children's Stories and Modified Palo Alto Writing Scale. Carlson, R. K. (1965). Sparkling Words. Berkeley, CA: Wagner Printing.

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Children's Language Usage Evaluation Scale

SCORING SHEET

0/1	ITEM	COMMENTS
	FLUENCY OF WRITING	
	1. Number of Ideas (Length)	
	2. Flow of Ideas	
	LANGUAGE USAGE	
	3. Verbs	
	4. Adjectives	
	5. Precision	
	6. Picturesque Speech	
	STORY STRUCTURE	
	7. Unusual Beginning	
	8. Unusual Dialogue	
	9. Unusual Ending	
	10. Unusual Plot	
	11. Inclusion of Readers	
	12. Vitality	
	NOVELTY	
	13. Novelty of Names	
	14. Novelty of Locale	
	15. Unique Punctuation & Expressional Devices	
	16. Novel Devices	
	17. Ingenuity in Solving Situations	
	18. Combination of Ideas in Unusual Relationships	
	19. Humor	
	PERSONAL INTERPRETATION	
	20. Unusual Ability to Express Emotional Depth	
	21. Unusual Sincerity in Expressing Personal Problems	
	22. Unusual Ability to Identify Self with Others	
	23. Unusual Sensitivity	
	24. Unique Philosophical Thinking	

OPTIONAL FEATURES: (Novelty of Ideas, Novelty of Theme, Novelty of Form, Facility in Beautiful Writing, Vivid Presentation of Personal Experience)

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Appendix G

Information Sheets for Participating Teachers and Parents

INFORMATION SHEET FOR TEACHERS

Because the parents of the children targeted for this project trust you, they are likely to call you with any questions they might have. Also, other parents or colleagues may have questions for you concerning this pilot study. The following information may help you in discussing the project:

"What will my child have to do?" Graduate research assistants from The University of Georgia will be coming into your school to work with the recommended students. The children will be pulled out of their classes to work with the researchers, but we will work closely with you (the classroom teacher) to make sure that the children's normal school day is disrupted as little as possible. The researchers will be interviewing each child regarding what he/she likes to do, what he/she likes about school, etc. (None of the questions will be of a personal nature.) The children will be taking two tests: one will be a school achievement test, the other an aptitude test. Neither test is particularly long, and most children find them enjoyable. In addition, the children will be engaged in some activities focusing on creative thinking and problem solving—the *Torrance Tests of Creative Thinking*, an Invent America!-like activity, and some creative writing. Again, these will not be stressful, and most children enjoy them. The children will in no way be penalized for being out of the classroom during this time.

"What's the purpose of this research?" The University of Georgia Project is part of a national effort to study new ways to measure the talents of students from a wide variety of backgrounds. Some groups have historically been underrepresented in our country's programs for gifted children; certainly one reason for this is that most of those programs use a very narrow definition of giftedness, usually focusing on a child's ability to score well on standardized tests. The University of Georgia's study is focusing on the distinguishing characteristics of bright students who display various potentials, but have not been identified by traditional means for gifted services.

"Does this mean that my child will be in the gifted program?" Some of the children participating in this study will undoubtedly be placed in their schools' gifted programs as a result of the thorough assessment conducted. But, whether or not a child is placed in the gifted program, there will be several benefits for all participating children:

(1) The information gathered on each child will be profiled and used to develop an individualized educational plan that focuses on the child's strengths.

(2) Teachers will be made aware of children's exceptional abilities, and they will be given guidance in planning classroom experiences which allow the children to use their exceptional abilities.

(3) Information about their children's exceptional abilities will be shared with parents, and suggestions will be provided as to how (a) they can continue to nurture those strengths at home, and (b) they can find community resources which can will further their children's education.

"It doesn't seem fair that only children who are either economically disadvantaged or of limited English proficiency are eligible for participation in this project. I know many other children who are bright, who I think should be identified as gifted by this procedure, but they don't qualify because of their economic status." While we agree that the Research-Based Assessment Plan is a better way of considering the abilities and educational needs of all children, we must keep in mind that this is a research study. The federal legislation that authorizes this study has set as its top priority finding better ways of identifying gifted children from these particular populations. It is an opportunity to pilot a project which at this point will include only those children who historically have been the most penalized by our current methods of identification. But we are confident that the knowledge gained through this study will begin to benefit a wider range of students very soon as state governments and local education agencies begin to take a new look at their definitions of giftedness and the criteria by which they are identifying children for gifted programs. Here in Georgia, the State Department of Education fully endorses this project and hopes to use the data we are collecting to make changes in our policies regarding gifted services by 1993.

If you receive any questions which you feel uncomfortable in answering, please refer those parents to Dr. Mary Frasier or Ms. Sally Krisel at the number or address on this sheet. We would also like for you to feel free to contact us with any questions you might have. Thank you.

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INFORMATION SHEET FOR PARENTS

WHAT TO TELL YOUR CHILD ABOUT THIS PROJECT

Why was I selected? The most important thing to communicate to your child about this project is how proud you are of him/her for being selected. We asked teachers to recommend students who were very bright, very creative, or highly motivated to achieve, and your child was selected! Congratulations!

What will I have to do? You can explain that some teachers from The University of Georgia will be coming to his/her school to meet with the students involved with the project. The teachers will be talking to them about the things they like to do, what they like about school, what they like to do in their free time, etc. Your child will be doing some writing and some drawing. These activities will show how your child is doing in school subjects, how good he/she is at thinking and solving problems, and how he/she uses creative thinking skills. The activities are not particularly long, and most children enjoy them.

Why are they doing this project? We know that children demonstrate their abilities in different ways. One way is through standardized test scores. But we also know that test scores do not always give a complete picture of a child's ability. In Georgia, however, qualification for some special programs is based solely on test scores. For example, many bright children do not qualify for gifted programs because they may show their abilities in other ways. That is the point of this research—to look at the other ways children demonstrate how capable they are.

What will they do with the information about me? The teachers from the university will use the information to get a more complete picture of your child's special strengths. They will then use this information to help your child's teacher design a more individualized educational program for him/her, a program that allows your child to learn even more because activities can be focused to take advantage of your child's exceptional abilities.

If you or your child have any other questions, please do not hesitate to contact Dr. Frasier, Ms. Krisel, or your child's teacher or principal.

Appendix H

Session "Feedforward" Instrument: Responses to Questions 1-6

Question	Strongly Disagree 1	2	3	4	Strongly Agree 5
1. Objectives of the session were clearly stated. (n= 254)	2(1)	12(5)	14(6)	62(24)	164(65)
2. Terms used were clearly defined. (n = 242)	0(0)	9(4)	20(8)	75(31)	138(57)
3. Handouts provided useful information. (n= 237)	0(0)	2(1)	19(8)	56(24)	160(68)
4. Overheads provided useful information. (n= 235)	3(1)	6(3)	27(11)	76(32)	123(52)
5. The presenter(s) were effective. (n = 241)	1(.4)	1(.4)	16(7)	57(24)	166(69)
6. Directions for using materials were adequate. (n = 243)	2(1)	3(1)	24(10)	71(29)	143(59)

Note. The numbers in parentheses are percentages.

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